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Report No.: 2105TW0102-U4
Report Version: 0.0
Issue Date: 2021-07-08

DFS MEASUREMENT REPORT

FCC PART 15 Subpart E

FCC ID	:	2AI9TOAW-AP135X
Applicant	:	ALE USA Inc.
Application Type	:	Certification
Product	:	OmniAccess Stellar
Model No.	:	OAW-AP1351
Brand Name	:	Alcatel-Lucent Enterprise
FCC Classification	:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s)	:	Part 15 Subpart E - 15.407 Section (h)(2)
Type of Device	:	Master Device
Received Date	:	March 17,2021
Test Date:	:	April 19~ May 25, 2021
Tested By	:	Fran Chen (Fran Chen)
Reviewed By	:	Paddy Chen (Paddy Chen)
Approved By	:	Chenz Ker (Chenz Ker)

Testing Laboratory
3261

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in Part 15.407. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
2105TW0102-U4	0.0	Original Report	2021-07-08	Valid

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Description Page

1. General Information

1.1. Applicant

ALE USA Inc.

26801 West Agoura Road, Calabasas, CA 91301, United States

1.2. Manufacturer

ALE USA Inc.

26801 West Agoura Road, Calabasas, CA 91301, United States

1.3. Testing Facility

☐	**Test Site - MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020	
☐	**Test Site - MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☒	**Test Site - MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725	
	FCC: 291082, TW3261	ISED: TW3261

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	OmniAccess Stellar
Model No.:	OAW-AP1351
Brand Name:	Alcatel-Lucent Enterprise
Wi-Fi Specification:	802.11a/b/g/n/ac/ax
Frequency Range:	**2.4GHz:** For 802.11b/g/n-HT20 /ax-HE20: 2412 ~ 2462 MHz For 802.11n-HT40 /ax-HE40: 2422 ~ 2452 MHz **5GHz:** For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5180~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5310MHz,5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80/ax-HE80: 5210MHz, 5290MHz,5530MHz, 5610MHz, 5690MHz, 5775MHz For 802.11ac-VHT160/ax-HE160: 5250MHz
Type of Modulation:	802.11b: DSSS, 802.11a/g/n/VHT/ac: OFDM, 802.11ax: OFDMA
TPC mechanism:	Support (Details refer to operational description)
Power-on cycle:	Requires 108.8 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band):	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

Note:

1. For other features of this EUT, test report will be issued separately.
2. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.

2.2. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	T_X Paths	Max Antenna Gain (dBi)	Directional Gain (dBi)		Beamforming Directional Gain (dBi)
				For Power	For PSD	
PIFA Antenna	2400 ~ 2483.5	4	3.9	3.9	9.92	9.92
Dipole Antenna	5150 ~ 5350	4	3.8	3.8	9.82	9.82
PIFA & Dipole Antenna	5470 ~ 5850	8	3.9	BW≥40M, 3.9 BW=20M, 6.9	12.93	12.93
Scanning						
Dipole Antenna	2400 ~ 2483.5	1	3.5	3.5	3.5	--
Dipole Antenna	5150 ~ 5250; 5725 ~5850	1	3.9	3.9	3.9	--
Bluetooth						
Dipole Antenna	2400 ~ 2483.5	1	3.5	3.5	3.5	--

Remark:

1. The EUT supports Cyclic Delay Diversity (CDD) mode and beamforming mode.
2. All antenna information (Antenna type and Peak Gain) is provided by the manufacturer.
3. High gain antenna power setting will be reduced according to difference value of antenna gain declared by applicant.

2.3. Operating Frequency and Channel List for this Report

802.11a/n-HT20/ac-VHT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
52	5260 MHz	56	5280 MHz	60	5300 MHz
64	5320 MHz	100	5500 MHz	104	5520 MHz
108	5540 MHz	112	5560 MHz	116	5580 MHz
120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz
144	5720 MHz	--	--	--	--

802.11n-HT40/ac-VHT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz	102	5510 MHz
110	5550MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	142	5710 MHz	--	--

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	--	--	--	--

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250 MHz	--	--	--	--

2.4. Test Channels for this Report

Test Mode	Test Channel	Test Frequency
802.11ax-HE20	60	5300 MHz
802.11ax-HE40	62	5310 MHz
802.11ax-HE80	58	5290 MHz
802.11ax-HE160	50	5250 MHz
802.11ax-HE20	100	5500 MHz
802.11ax-HE40	102	5510 MHz
802.11ax-HE80	106	5530 MHz

2.5. Test Mode

Test Mode	Make the EUT communicate with notebook at DFS channel

3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

3.1. Applicability

The following table from FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 lists the applicable requirements for the DFS testing.

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 3-1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode	
	Master Device or Client With Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Table 3-2: Applicability of DFS Requirements during normal operation

3.2. DFS Devices Requirements

Per FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:

(a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.

(b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.

(c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.

(d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).

(e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.

(f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.

(g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

Channel Move Time and Channel Closing Transmission Time requirements are listed in the following table.

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.	

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 3-3: DFS Response Requirements

3.3. DFS Detection Threshold Values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring. These detection thresholds are listed in the following table.

Maximum Transmit Power	**Value** **(See Notes 1, 2, and 3)**
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 3-4: Detection Thresholds for Master Devices and Client Devices with Radar Detection

3.4. Parameters of DFS Test Signals

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\text{usec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Table 3-5: Parameters for Short Pulse Radar Waveforms

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

Table 3-6: Pulse Repetition Intervals Values for Test A

Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50 - 100	5 - 20	1000 - 2000	1 - 3	8 - 20	80%	30

Table 3-7: Parameters for Long Pulse Radar Waveforms

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses Per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

Table 3-8: Parameters for Frequency Hopping Radar Waveforms

For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

3.5. Conducted Test Setup

The FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.

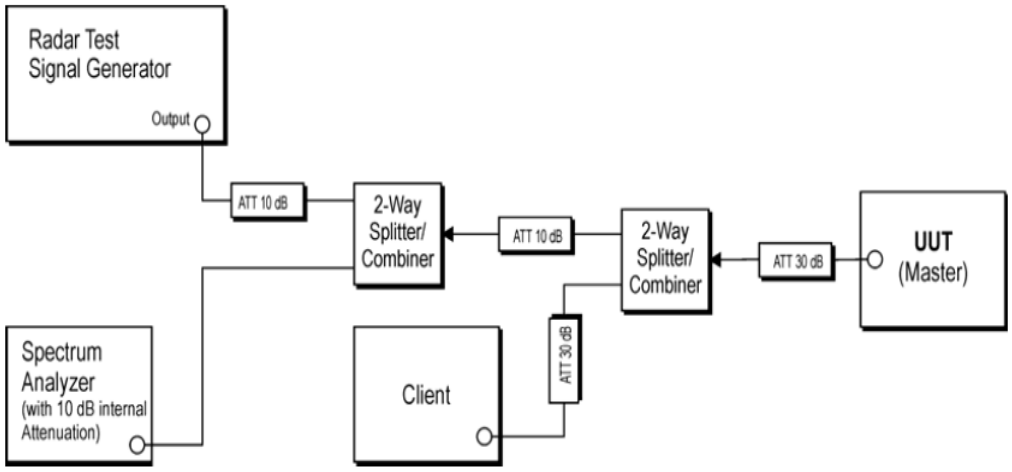


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

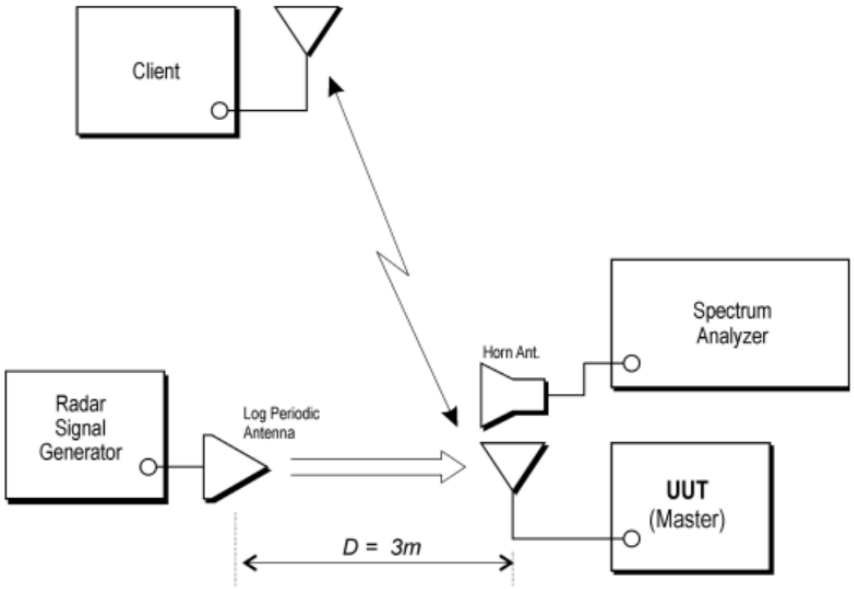


Figure 3-2: Radiated Test Setup where UUT is a Master and Radar Test Waveforms are injected into the UUT

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection-SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/14
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/7/14
Vector Signal Generator	Keysight	N5182B	MRTTWA00010	1 year	2022/4/19
Combiner	WOKEN	0120A04208001S	MRTTWE00008	1 year	2021/6/18

Software	Version	Manufacturer	Function
Pulse Building(N7607B)	V 3.0.0	Keysight	Radar Signal Generation Software
DFS Tool	V 6.7	Keysight	DFS Test Software

5. TEST RESULT

5.1. Summary

Parameter	Limit	Test Result	Reference
UNII Detection Bandwidth Measurement	Refer Table 3-3	Pass	Section 5.4
Initial Channel Availability Check Time	Refer Table 3-3	Pass	Section 5.5
Radar Burst at the Beginning of the Channel Availability Check Time	Refer Table 3-3	Pass	Section 5.6
Radar Burst at the End of the Channel Availability Check Time	Refer Table 3-3	Pass	Section 5.7
In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time	Refer Table 3-3	Pass	Section 5.8
Non-Occupancy Period	Refer Table 3-3	Pass	Section 5.8
Statistical Performance Check	Refer Table 3-3	Pass	Section 5.9

5.2. Radar Waveform Calibration

5.2.1. Calibration Setup

The conducted test setup was used for this calibration testing. Figure 3-2 shows the typical test setup.

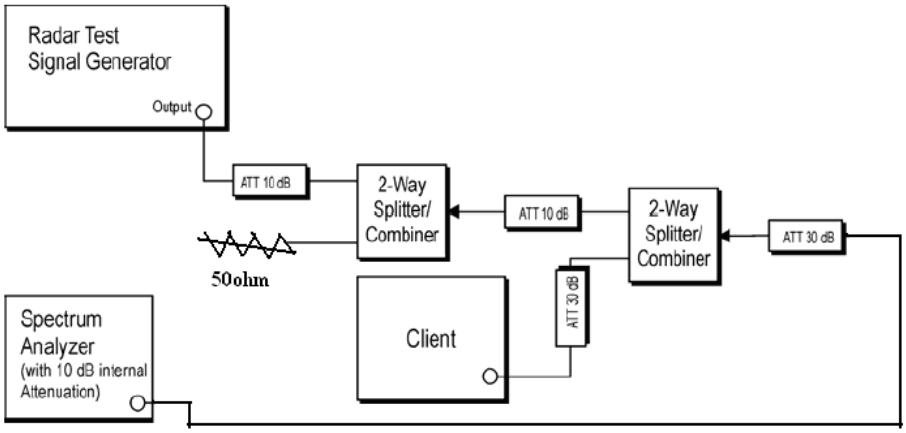


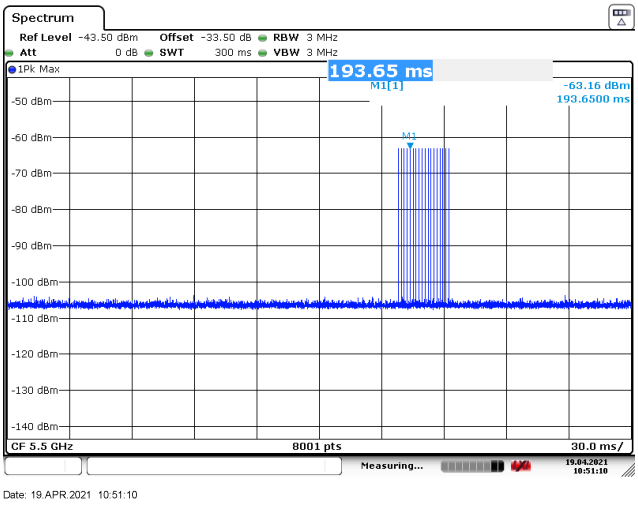
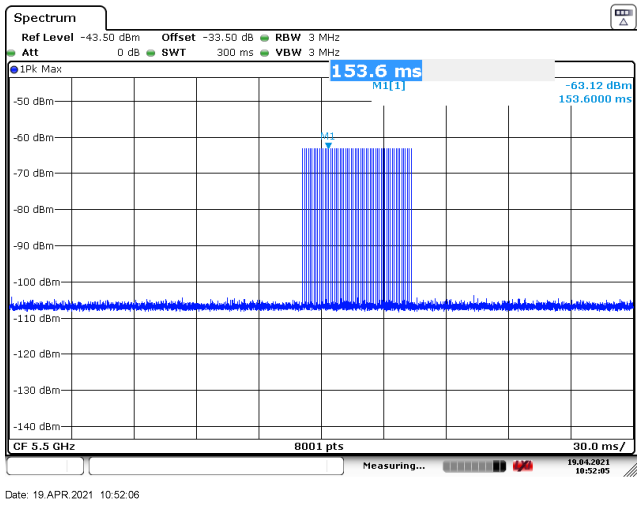
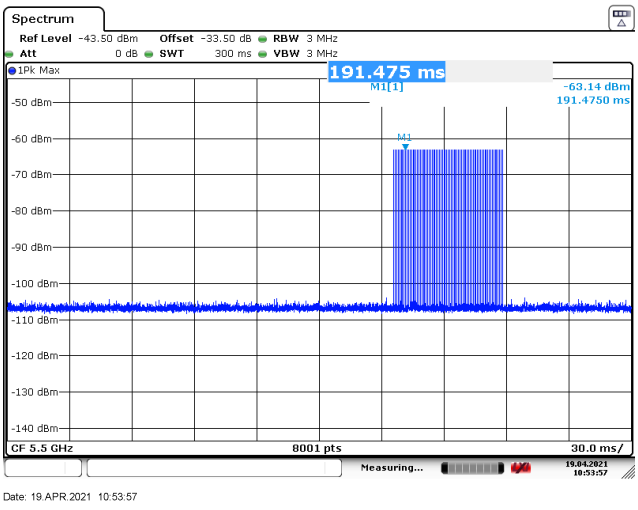
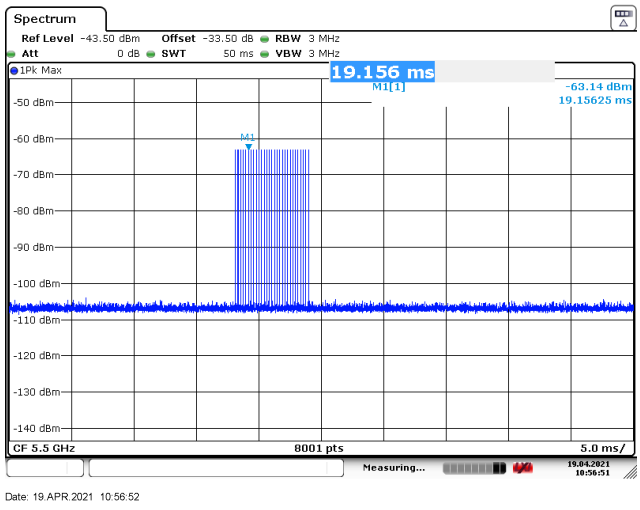
Figure 3-2: Conducted Test Setup

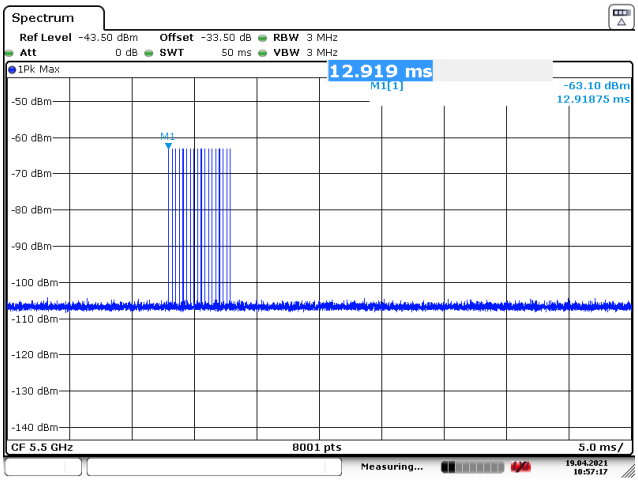
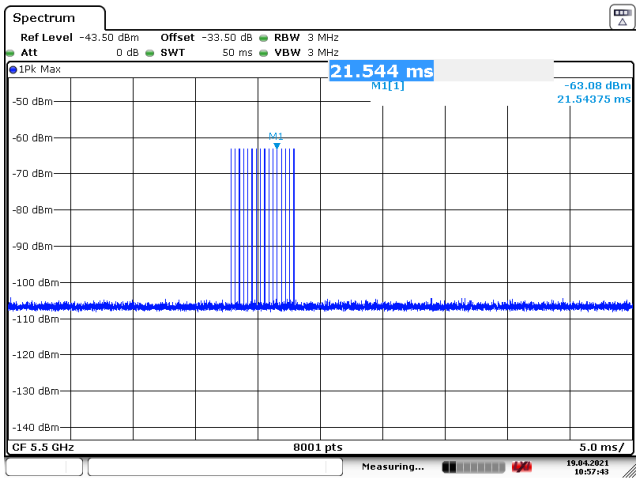
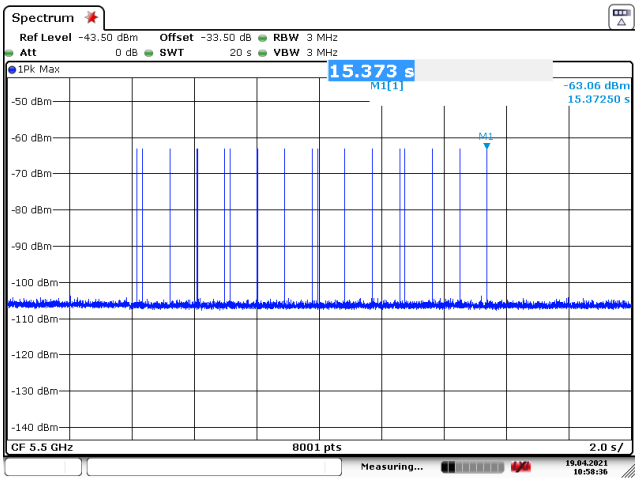
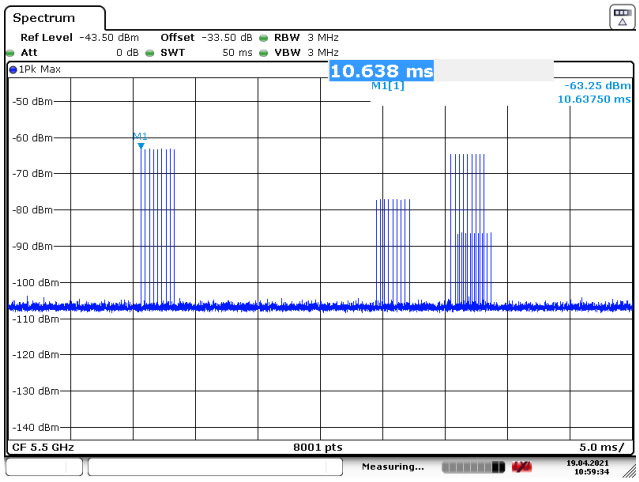
5.2.2. Calibration Procedure

The Interference Radar Detection Threshold Level is (-64dBm) + (0) [dBi] + 1 dB= -63 dBm that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was (-64dBm) + (0) [dBi] + 1 dB= -63dBm. Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

5.2.3. Cablibration Result

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Radar Waveform Calibration		

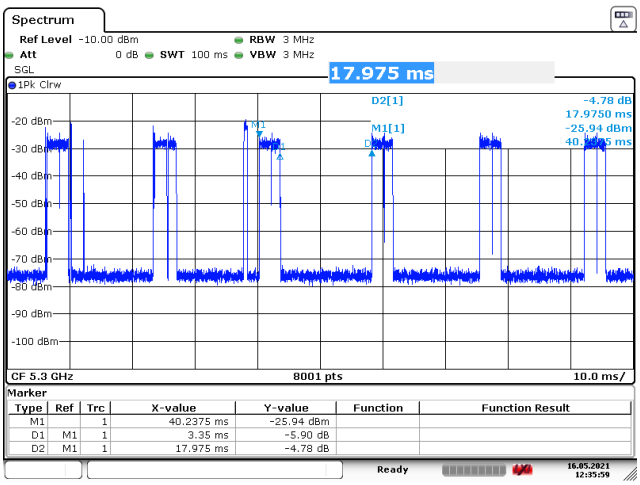
Radar #0	Radar #1 (Test A) PRI = 898us and the number of pulses = 59
	
Radar #1 (Test B) PRI = 781us and the number of pulses = 68	Radar #2
	

Radar #3	Radar #4
	
Date: 19.APR.2021 10:57:17	Date: 19.APR.2021 10:57:44
Radar #5	**Radar #6**
	
Date: 19.APR.2021 10:58:36	Date: 19.APR.2021 10:59:34

5.2.4. Channel Loading Test Result

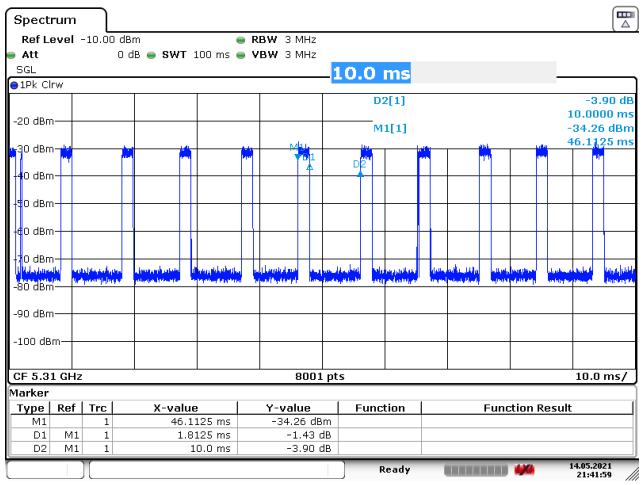
Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/23 ~ 2021/05/16
Test Item	Channel Loading		

802.11ax-HE20 (5300MHz)



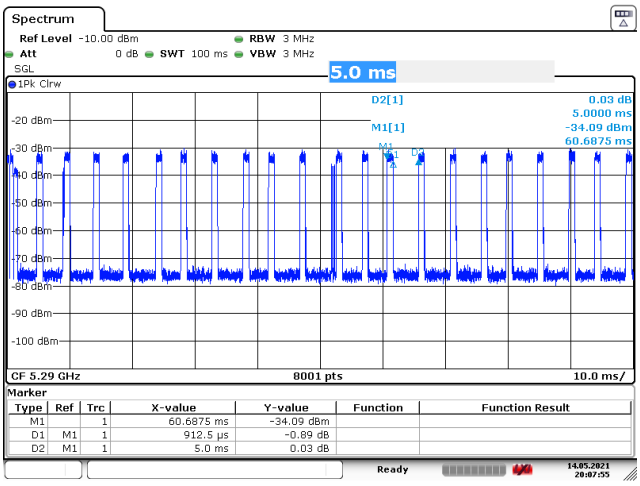
Date: 16.MAY.2021 12:35:59

802.11ax-HE40 (5310MHz)



Date: 14.MAY.2021 21:42:00

802.11ax-HE80 (5290MHz)



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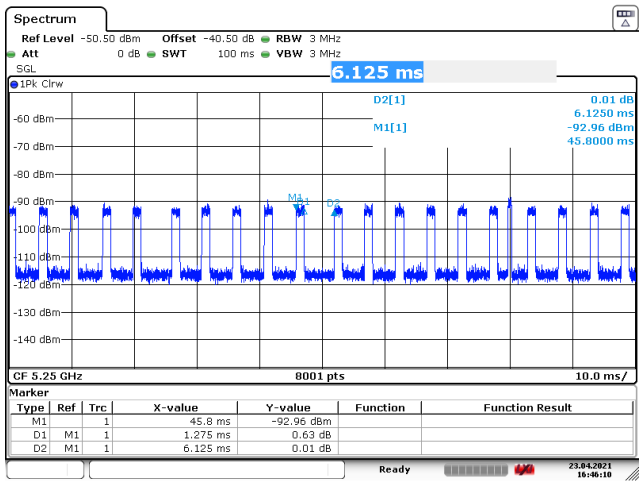
802.11ax-HE160 (5250MHz)



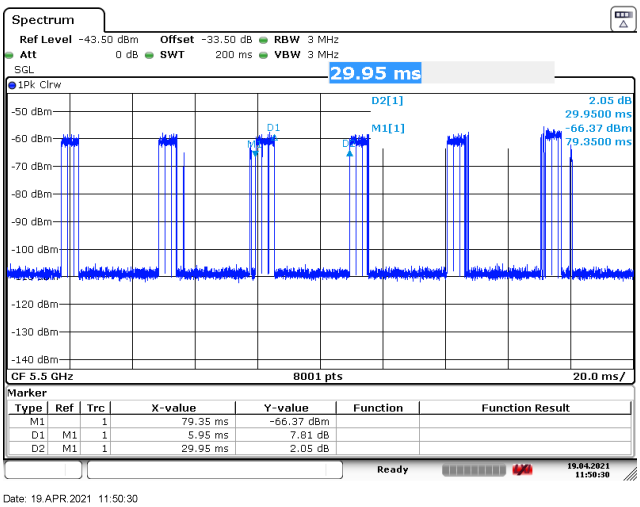
Date: 23.APR.2021 16:46:10

Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ax-HE20	5300 MHz	18.64%	≥ 17%	Pass
802.11ax-HE40	5310 MHz	18.13%	≥ 17%	Pass
802.11ax-HE80	5290 MHz	18.25%	≥ 17%	Pass
802.11ax-HE160	5250 MHz	20.82%	≥ 17%	Pass
Note: System testing was performed with the designated iperf test file. This file is used by IP and				

Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Packet ratio = Time On / (Time On + Off Time).

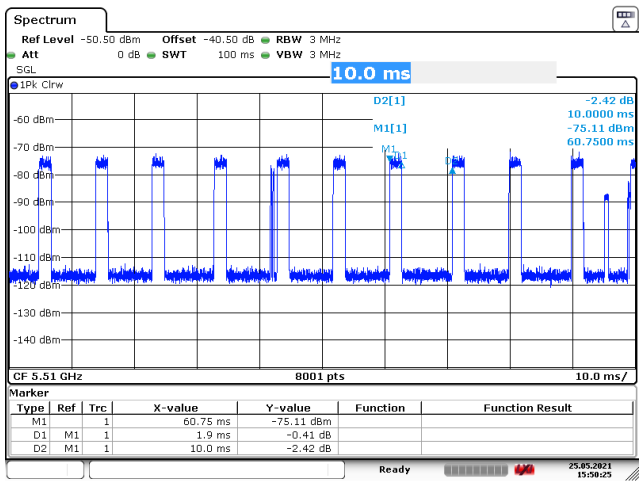
Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19 ~ 2021/05/25
Test Item	Channel Loading		

802.11ax-HE20 (5500MHz)



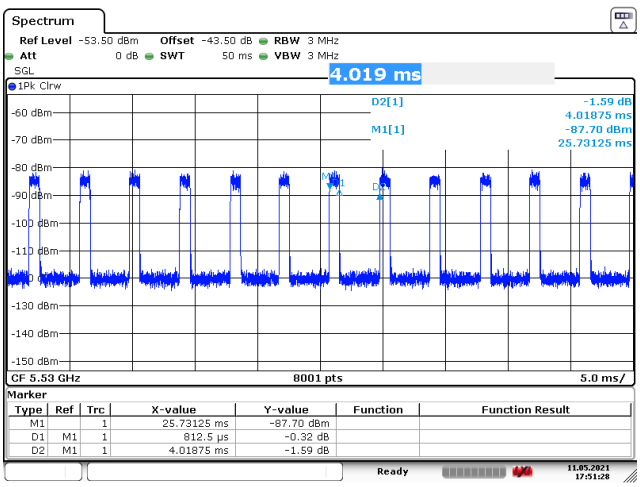
Date: 19.APR.2021 11:50:30

802.11ax-HE40 (5510MHz)



Date: 25.MAY.2021 15:50:25

802.11ax-HE80 (5530MHz)



Date: 11.MAY.2021 17:51:28

Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ax-HE20	5500 MHz	19.87%	≥ 17%	Pass
802.11ax-HE40	5510 MHz	19.00%	≥ 17%	Pass
802.11ax-HE80	5530 MHz	20.22%	≥ 17%	Pass

Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Packet ratio = Time On / (Time On + Off Time).

5.3. UNII Detection Bandwidth Measurement

5.3.1. Test Limit

Minimum 100% of the UNII 99% transmission power bandwidth. During the U-NII Detection Bandwidth detection test, each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

5.3.2. Test Procedure

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

5.3.3. Test Result

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE20 mode - 5300MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5290	0	0	0	0	0	0	0	0	0	0	0%
5290.4F_L	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5309.5 F_H	1	1	1	1	1	1	1	1	1	1	100%
5310	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 19.04MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = F_H - F_L = 5509.5MHz – 5490.4MHz = 19.1MHz

Note 3: NII Detection Bandwidth Min. Limit (MHz): 19.04MHz x 100% = 19.04MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE40 mode – 5310MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 F_L	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 F_H	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 37.53MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = F_H - F_L = 5529MHz - 5491MHz = 38MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 37.53MHz x 100% = 37.53MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE80 mode – 5290MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5250	0	0	0	0	0	0	0	0	0	0	0%
5251 FL	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 77.20MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 77.20MHz x 100% = 77.20MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE160 mode – 5250MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5250 FL	1	1	1	1	1	1	1	1	1	1	0%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5250MHz. The 99% channel bandwidth is 76.98MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5329MHz - 5250MHz = 79MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 76.98MHz x 100% = 76.98MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE20 mode - 5500MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5490	0	0	0	0	0	0	0	0	0	0	0%
5490.5F_L	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5509.5 F_H	1	1	1	1	1	1	1	1	1	1	100%
5510	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 18.94MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = F_H - F_L = 5509.5MHz – 5490.5MHz = 19.0MHz

Note 3: NII Detection Bandwidth Min. Limit (MHz): 18.94MHz x 100% = 18.94MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE40 mode – 5510MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 F_L	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529 F_H	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 37.67MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = F_H - F_L = 5529MHz - 5491MHz = 38MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 37.67MHz x 100% = 37.67MHz.

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/19
Test Item	Detection Bandwidth (802.11ax-HE80 mode – 5530MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 FH	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 76.97MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 76.97MHz x 100% = 76.97MHz.

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

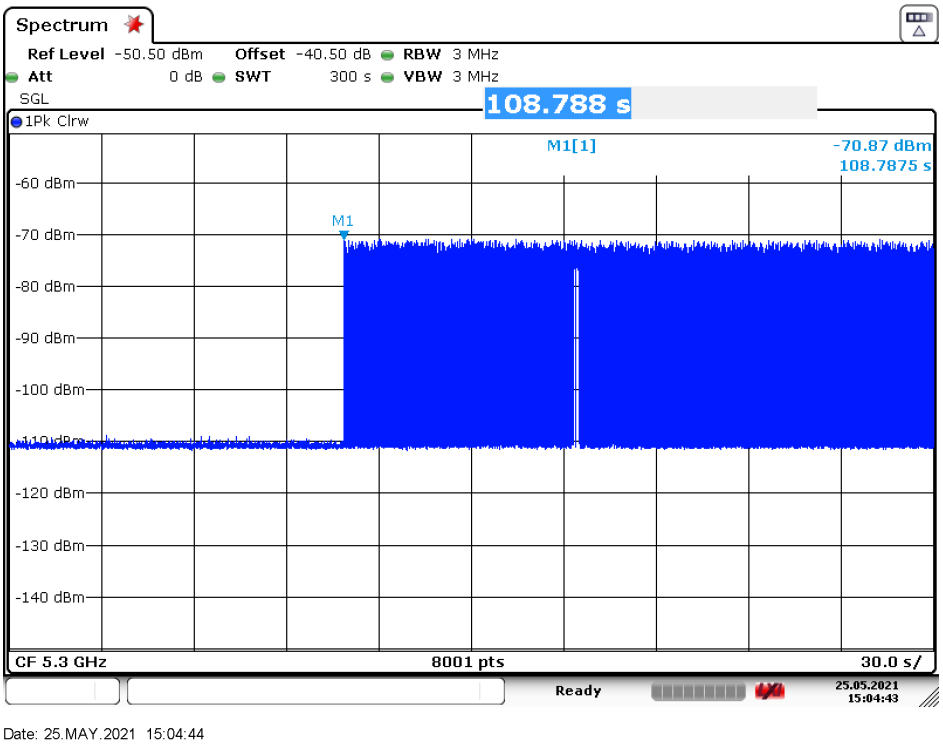
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

5.4.2. Test Procedure

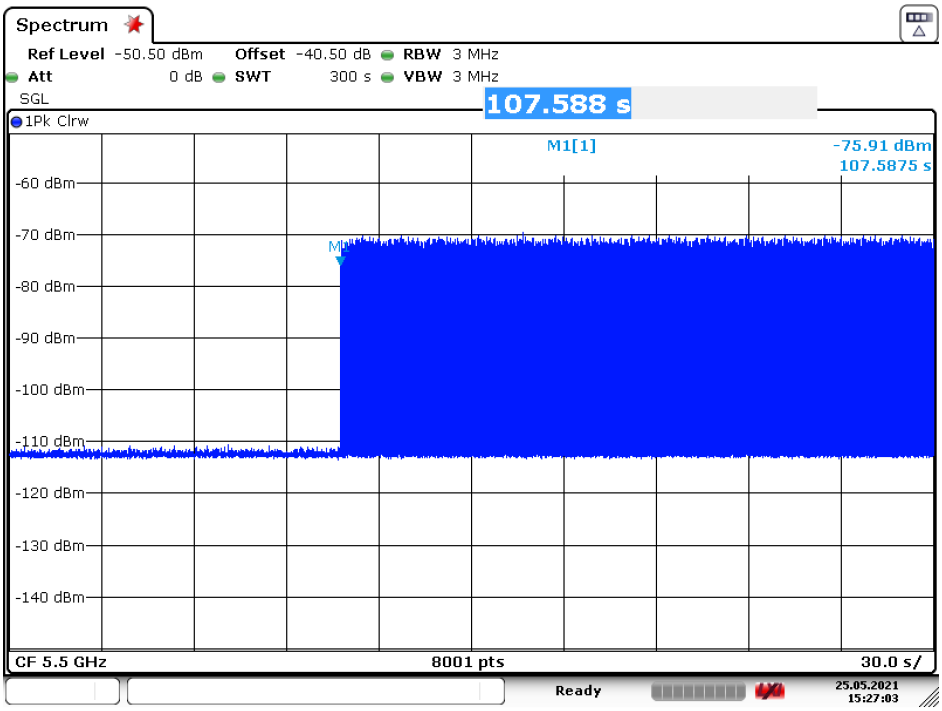
1. The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

5.4.3. Test Result

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/05/25
Test Item	Initial Channel Availability Check Time (802.11ax-HE20 mode - 5300MHz)		

Initial Channel Availability Check Time
 Date: 25.MAY.2021 15:04:44
Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (48.8 sec). Initial beacons/data transmissions are indicated by marker 1 (108.8 sec).

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/05/25
Test Item	Initial Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz)		

Initial Channel Availability Check Time
 Date: 25.MAY.2021 15:27:04
Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (47.6 sec). Initial beacons/data transmissions are indicated by marker 1 (107.6 sec).

5.5. Radar Burst at the Beginning of the Channel Availability Check Time Measurement

5.5.1. Test Limit

In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

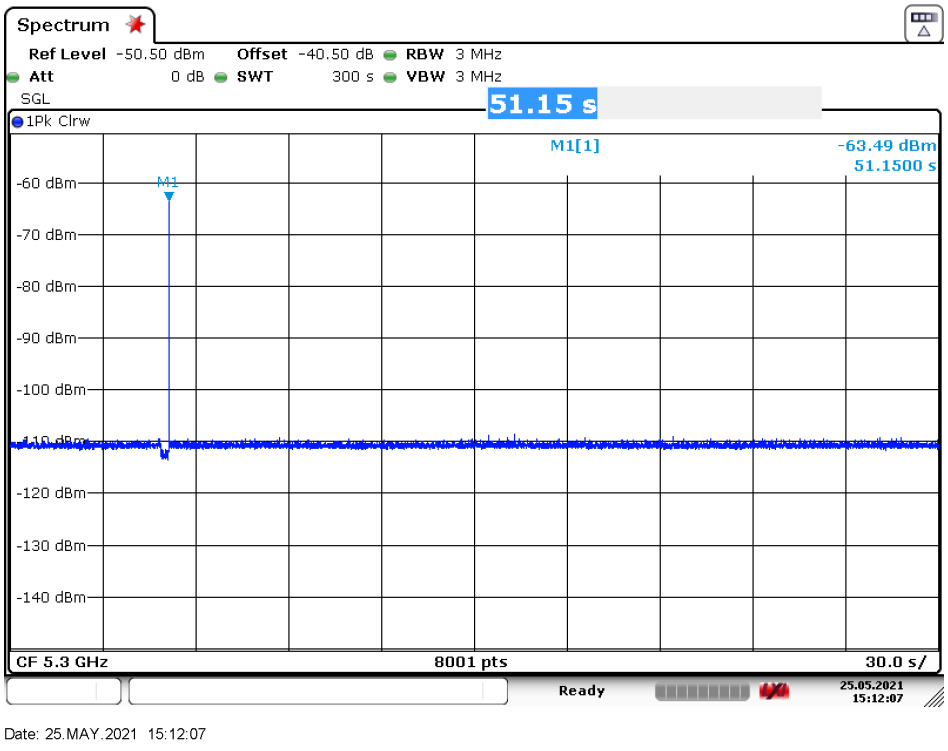
5.5.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

5.5.3. Test Result

Product	OmniAccess Stellar, OAW-AP1351	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	AC1	Test Date	2021/05/25
Test Item	Beginning of the Channel Availability Check Time (802.11ax-HE20 mode - 5300MHz)		

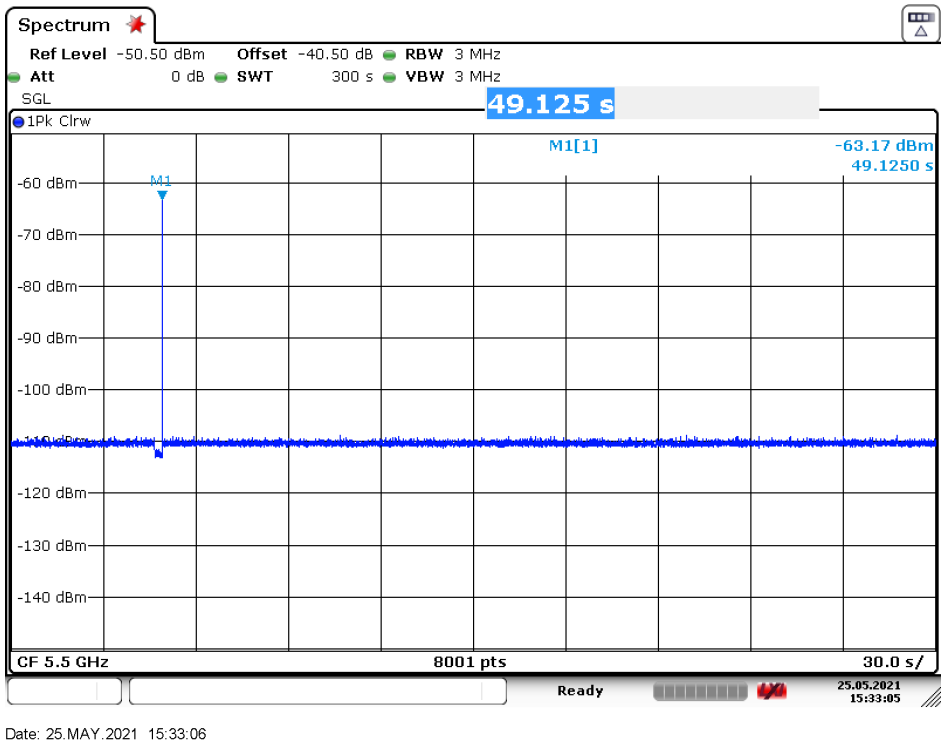
Beginning of the Channel Availability Check Time



Date: 25.MAY.2021 15:12:07

Product	OmniAccess Stellar, OAW-AP1351	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	AC1	Test Date	2021/05/25
Test Item	Beginning of the Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz)		

Beginning of the Channel Availability Check Time



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5.6. Radar Burst at the End of the Channel Availability Check Time Measurement

5.6.1. Test Limit

In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

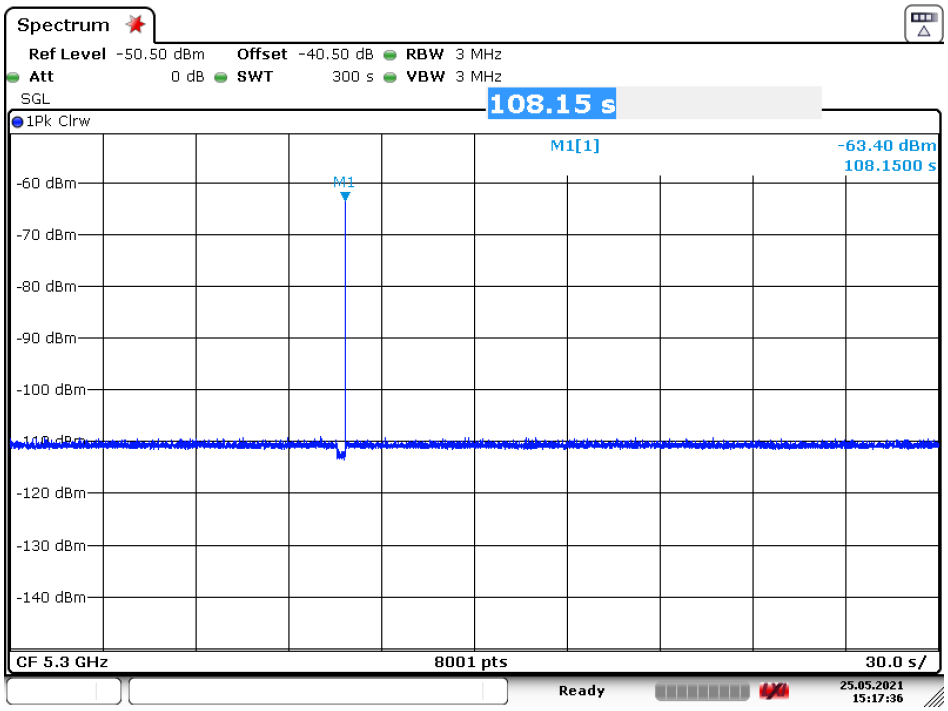
5.6.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner thanT1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

5.6.3. Test Result

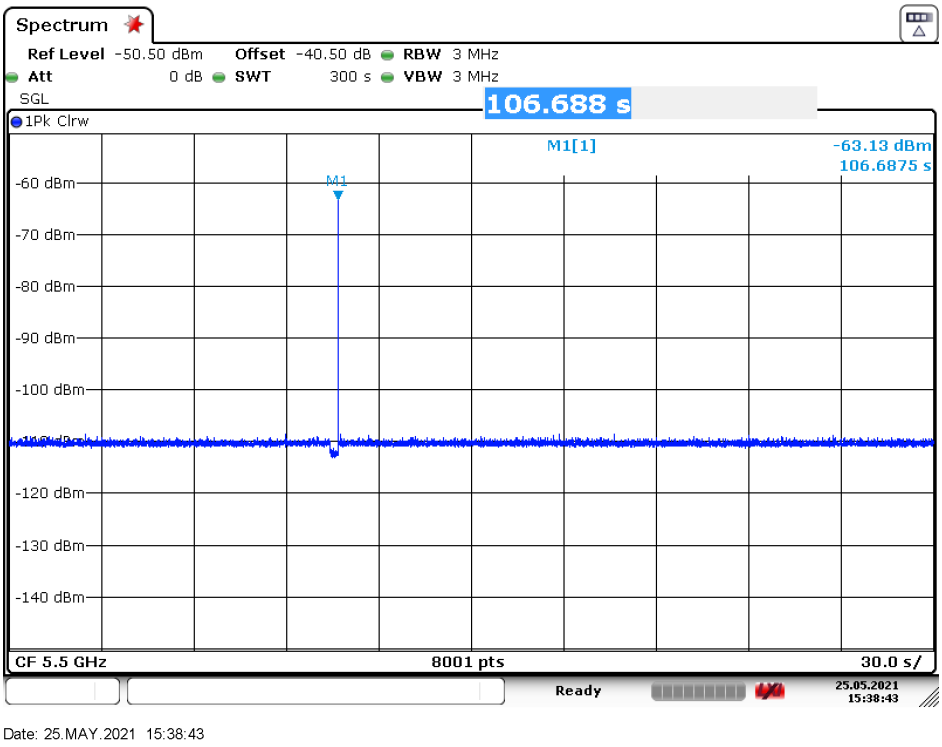
Product	OmniAccess Stellar, OAW-AP1351	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	AC1	Test Date	2021/05/25
Test Item	End of the Channel Availability Check Time (802.11ax-HE20 mode - 5300MHz)		

End of the Channel Availability Check Time



Product	OmniAccess Stellar, OAW-AP1351	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	AC1	Test Date	2021/05/25
Test Item	End of the Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz)		

End of the Channel Availability Check Time



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5.7. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement

5.7.1. Test Limit

The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. The total duration of Channel Closing Transmission Time is 260ms, consisting of data signals and the aggregate of control signals, by a U-NII device during the Channel Move Time. The Non-Occupancy Period time is 30 minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

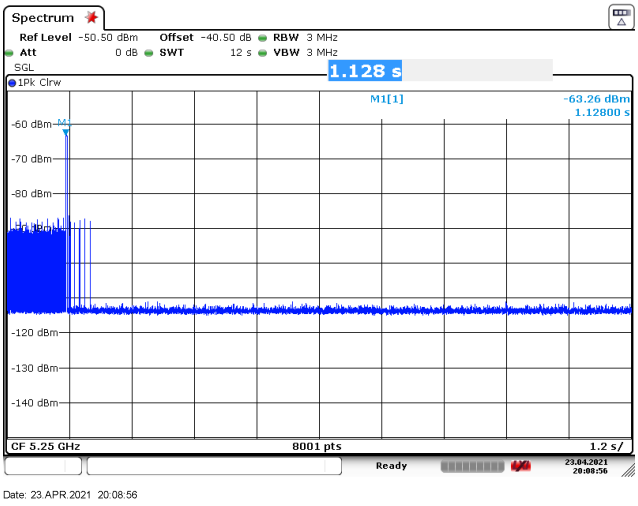
5.7.2. Test Procedure Used

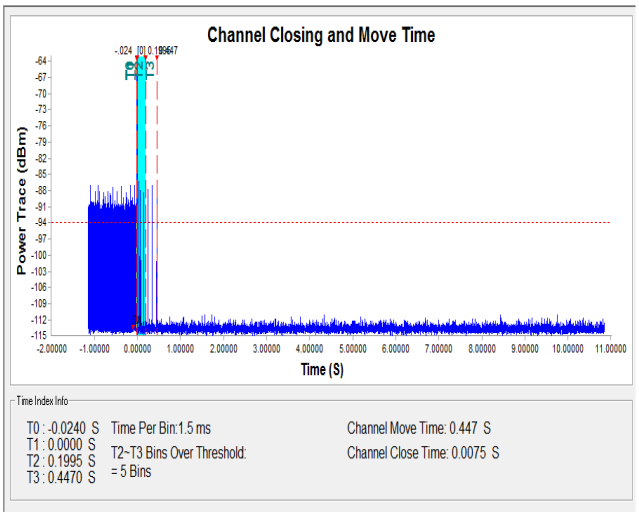
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
3. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
4. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (1.5ms) = S (12 sec) / B (8000); where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: C = N X Dwell; where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.
5. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

5.7.3. Test Result

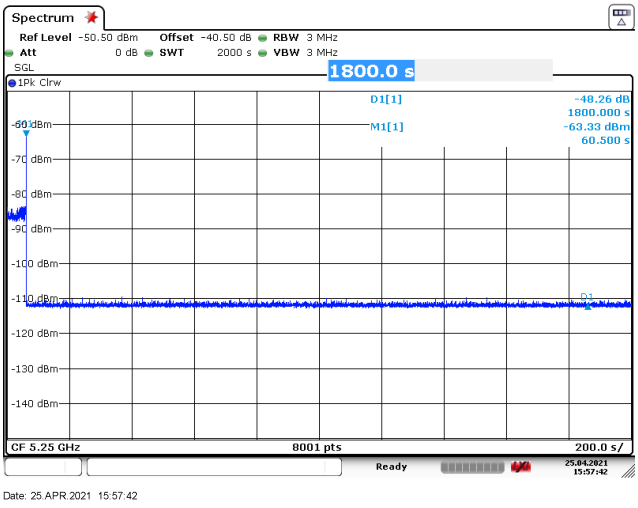
Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/23
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ax-HE160 mode - 5250MHz)		

Channel Move Time and Channel Closing Transmission Time





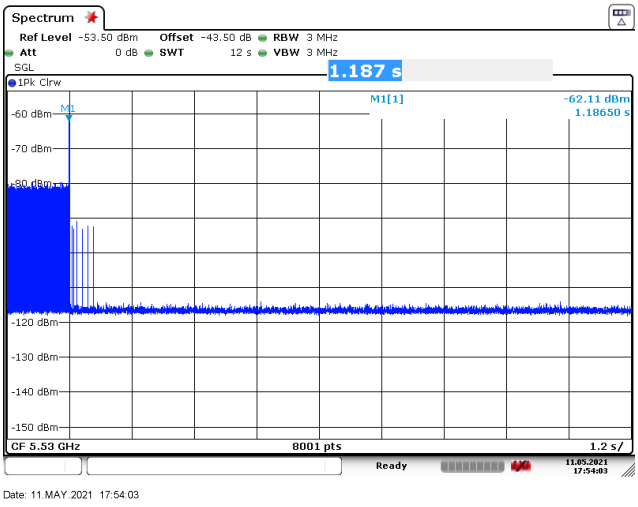
Non-Occupancy Period

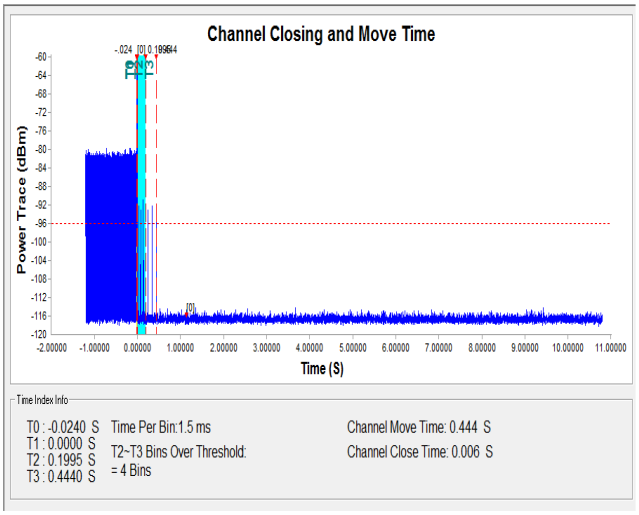


Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.447s	< 60ms
Channel Closing Transmission Time (ms) (Note)	7.5ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.		

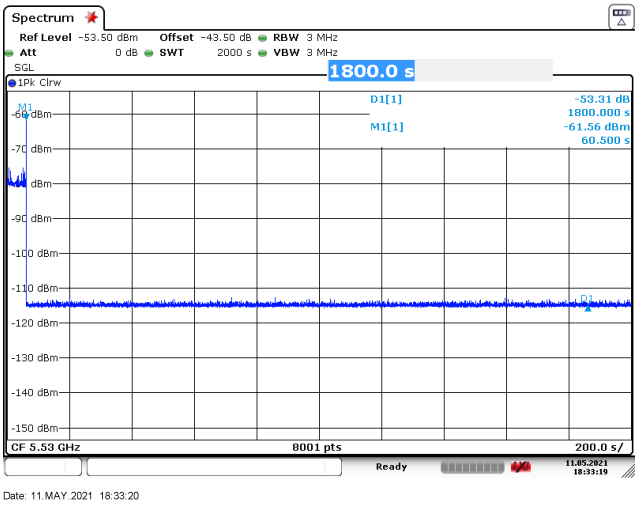
Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/05/11
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ax-HE80 mode - 5530MHz)		

Channel Move Time and Channel Closing Transmission Time





Non-Occupancy Period



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.444s	< 60ms
Channel Closing Transmission Time (ms) (Note)	6ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.		

5.8. Statistical Performance Check Measurement

5.8.1. Test Limit

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

Radar Type	Minimum Number of Trails	Detection Probability
0	30	Pd > 60%
1	30(15 of test A and 15 of test B)	Pd > 60%
2	30	Pd > 60%
3	30	Pd > 60%
4	30	Pd > 60%
Aggregate (Radar Types 1-4)	120	Pd > 80%
5	30	Pd > 80%
6	30	Pd > 70%

The percentage of successful detection is calculated by:
(Total Waveform Detections / Total Waveform Trails) * 100 = Probability of Detection Radar Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: (Pd1 + Pd2 + Pd3 + Pd4) / 4.

5.8.2. Test Procedure

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time T0 the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

5.8.3. Test Result

Product	OmniAccess Stellar, OAW-AP1351	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2021/04/22
Test Item	Radar Statistical Performance Check (802.11ax-HE20 – 5300MHz)		

Radar Type 1-4 - Radar Statistical Performance

Trial	Frequency (MHz)	1 detect ,0 no detect			
		Radar Type 1	Radar Type 2	Radar Type 3	Radar Type 4
0	5290.4	1	1	0	1
1	5291	1	1	1	1
2	5292	1	1	0	1
3	5303	1	1	0	0
4	5293	1	1	1	1
5	5294	1	1	0	1
6	5298	1	1	1	1
7	5295	1	1	1	1
8	5307	1	1	0	1
9	5296	1	0	1	1
10	5297	1	1	1	1
11	5308	1	1	0	1
12	5298	1	1	1	1
13	5299	1	0	1	1
14	5292	1	1	1	1
15	5300	1	1	1	1
16	5301	1	1	1	1
17	5302	0	1	1	0
18	5302	1	1	1	1
19	5303	1	1	1	1
20	5296	1	1	1	0
21	5304	1	1	1	1
22	5294	1	1	1	0
23	5305	1	1	1	1
24	5306	1	1	0	0
25	5305	1	1	1	1
26	5307	1	1	1	0

Trial	Frequency	1 detect ,0 no detect	Trial	Frequency	1 detect ,0 no detect
27	5308	1	1	1	1
28	5309	1	0	1	0
29	5309.5	1	1	1	1
Probability:		96.7%	90.0%	76.7%	76.7%
Type1-4		85% (>80%)			

Radar Type 1 - Radar Waveform

	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 1	1.0	838.0	63	52794.0
Download	1	Type 1	1.0	3066.0	18	55188.0
Download	2	Type 1	1.0	918.0	58	53244.0
Download	3	Type 1	1.0	558.0	95	53010.0
Download	4	Type 1	1.0	878.0	61	53558.0
Download	5	Type 1	1.0	778.0	68	52904.0
Download	6	Type 1	1.0	538.0	99	53262.0
Download	7	Type 1	1.0	618.0	86	53148.0
Download	8	Type 1	1.0	638.0	83	52954.0
Download	9	Type 1	1.0	578.0	92	53176.0
Download	10	Type 1	1.0	598.0	89	53222.0
Download	11	Type 1	1.0	518.0	102	52836.0
Download	12	Type 1	1.0	938.0	57	53466.0
Download	13	Type 1	1.0	698.0	76	53048.0
Download	14	Type 1	1.0	758.0	70	53060.0
Download	15	Type 1	1.0	2704.0	20	54080.0
Download	16	Type 1	1.0	2518.0	21	52878.0
Download	17	Type 1	1.0	713.0	75	53475.0
Download	18	Type 1	1.0	913.0	58	52954.0
Download	19	Type 1	1.0	3029.0	18	54522.0
Download	20	Type 1	1.0	1259.0	42	52878.0
Download	21	Type 1	1.0	3048.0	18	54864.0
Download	22	Type 1	1.0	2594.0	21	54474.0
Download	23	Type 1	1.0	1202.0	44	52888.0
Download	24	Type 1	1.0	2973.0	18	53514.0
Download	25	Type 1	1.0	2658.0	20	53160.0
Download	26	Type 1	1.0	2773.0	20	55460.0
Download	27	Type 1	1.0	2226.0	24	53424.0
Download	28	Type 1	1.0	1306.0	41	53546.0
Download	29	Type 1	1.0	2482.0	22	54604.0

Radar Type 2 - Radar Waveform

	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 2	3.3	222.0	27	5994.0
Download	1	Type 2	3.9	209.0	28	5852.0
Download	2	Type 2	2.1	164.0	24	3936.0
Download	3	Type 2	1.4	166.0	23	3818.0
Download	4	Type 2	3.9	185.0	28	5180.0
Download	5	Type 2	2.3	202.0	25	5050.0
Download	6	Type 2	1.0	159.0	23	3657.0
Download	7	Type 2	3.1	153.0	26	3978.0
Download	8	Type 2	1.6	230.0	24	5520.0
Download	9	Type 2	2.2	195.0	25	4875.0
Download	10	Type 2	1.9	182.0	24	4368.0
Download	11	Type 2	2.6	227.0	25	5675.0
Download	12	Type 2	3.9	217.0	28	6076.0
Download	13	Type 2	2.7	150.0	25	3750.0
Download	14	Type 2	3.5	215.0	27	5805.0
Download	15	Type 2	1.3	203.0	23	4669.0
Download	16	Type 2	3.5	191.0	27	5157.0
Download	17	Type 2	2.5	200.0	25	5000.0
Download	18	Type 2	2.3	165.0	25	4125.0
Download	19	Type 2	4.3	171.0	28	4788.0
Download	20	Type 2	2.9	168.0	26	4368.0
Download	21	Type 2	1.4	151.0	23	3473.0
Download	22	Type 2	2.6	160.0	25	4000.0
Download	23	Type 2	3.8	194.0	27	5238.0
Download	24	Type 2	3.1	163.0	26	4238.0
Download	25	Type 2	4.6	154.0	29	4466.0
Download	26	Type 2	2.3	190.0	25	4750.0
Download	27	Type 2	2.2	229.0	25	5725.0
Download	28	Type 2	1.4	206.0	23	4738.0
Download	29	Type 2	1.6	156.0	24	3744.0

Radar Type 3 - Radar Waveform

	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 3	8.3	444.0	17	7548.0
Download	1	Type 3	8.9	329.0	18	5922.0
Download	2	Type 3	7.1	494.0	16	7904.0
Download	3	Type 3	6.4	356.0	16	5696.0
Download	4	Type 3	8.9	305.0	18	5490.0
Download	5	Type 3	7.3	410.0	17	6970.0
Download	6	Type 3	6.0	482.0	16	7712.0
Download	7	Type 3	8.1	297.0	17	5049.0
Download	8	Type 3	6.6	496.0	16	7936.0
Download	9	Type 3	7.2	360.0	16	5760.0
Download	10	Type 3	6.9	337.0	16	5392.0
Download	11	Type 3	7.6	344.0	17	5848.0
Download	12	Type 3	8.9	451.0	18	8118.0
Download	13	Type 3	7.7	497.0	17	8449.0
Download	14	Type 3	8.5	492.0	17	8364.0
Download	15	Type 3	6.3	422.0	16	6752.0
Download	16	Type 3	8.5	333.0	17	5661.0
Download	17	Type 3	7.5	476.0	17	8092.0
Download	18	Type 3	7.3	216.0	17	3672.0
Download	19	Type 3	9.3	259.0	18	4662.0
Download	20	Type 3	7.9	224.0	17	3808.0
Download	21	Type 3	6.4	438.0	16	7008.0
Download	22	Type 3	7.6	402.0	17	6834.0
Download	23	Type 3	8.8	495.0	18	8910.0
Download	24	Type 3	8.1	317.0	17	5389.0
Download	25	Type 3	9.6	336.0	18	6048.0
Download	26	Type 3	7.3	430.0	16	6880.0
Download	27	Type 3	7.2	491.0	16	7856.0
Download	28	Type 3	6.4	387.0	16	6192.0
Download	29	Type 3	6.6	210.0	16	3360.0

Radar Type 4 - Radar Waveform

	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 4	16.2	444.0	14	6216.0
Download	1	Type 4	17.6	329.0	15	4935.0
Download	2	Type 4	13.4	494.0	13	6422.0
Download	3	Type 4	11.9	356.0	12	4272.0
Download	4	Type 4	17.6	305.0	15	4575.0
Download	5	Type 4	14.0	410.0	13	5330.0
Download	6	Type 4	11.1	482.0	12	5784.0
Download	7	Type 4	15.6	297.0	14	4158.0
Download	8	Type 4	12.5	496.0	12	5952.0
Download	9	Type 4	13.8	360.0	13	4680.0
Download	10	Type 4	13.1	337.0	13	4381.0
Download	11	Type 4	14.7	344.0	14	4816.0
Download	12	Type 4	17.5	451.0	15	6765.0
Download	13	Type 4	14.8	497.0	14	6958.0
Download	14	Type 4	16.6	492.0	15	7380.0
Download	15	Type 4	11.6	422.0	12	5064.0
Download	16	Type 4	16.7	333.0	15	4995.0
Download	17	Type 4	14.5	476.0	13	6188.0
Download	18	Type 4	14.0	216.0	13	2808.0
Download	19	Type 4	18.4	259.0	16	4144.0
Download	20	Type 4	15.4	224.0	14	3136.0
Download	21	Type 4	11.9	438.0	12	5256.0
Download	22	Type 4	14.7	402.0	14	5628.0
Download	23	Type 4	17.3	495.0	15	7425.0
Download	24	Type 4	15.8	317.0	14	4438.0
Download	25	Type 4	19.1	336.0	16	5376.0
Download	26	Type 4	13.9	430.0	13	5590.0
Download	27	Type 4	13.8	491.0	13	6383.0
Download	28	Type 4	11.9	387.0	12	4644.0
Download	29	Type 4	12.4	210.0	12	2520.0

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
0	5300	1	15	5292.8	1
1	5300	1	16	5296.4	1
2	5300	1	17	5294.8	1
3	5300	1	18	5294.4	1
4	5300	1	19	5297.6	1
5	5300	1	20	5304.7	1
6	5300	1	21	5307.1	1
7	5300	1	22	5305.1	1
8	5300	1	23	5303.1	1
9	5300	1	24	5304.3	1
10	5293.6	1	25	5301.9	1
11	5294.8	1	26	5305.5	1
12	5296.8	1	27	5305.9	1
13	5294.8	1	28	5307.1	1
14	5296.0	1	29	5306.7	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_0

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
655578.0	79.0	14	2	1306.0	1695.0	-
51781.0	86.5	14	3	1908.0	1130.0	1431.0
245526.0	63.7	14	1	1856.0	-	-
439080.0	55.4	14	1	1894.0	-	-
630027.0	86.5	14	3	1363.0	1836.0	1998.0
28053.0	66.8	14	2	1615.0	1764.0	-
221832.0	50.6	14	1	1317.0	-	-
414745.0	75.7	14	2	1499.0	1342.0	-
609479.0	58.4	14	1	1008.0	-	-
4267.0	65.4	14	1	1107.0	-	-
197911.0	61.9	14	1	1560.0	-	-
391178.0	70.6	14	2	1218.0	1117.0	-
582750.0	86.2	14	3	1752.0	1546.0	1612.0
777385.0	71.2	14	2	1213.0	1850.0	-
173735.0	81.0	14	2	1271.0	1773.0	-

Type 5 Radar Waveform_1

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
324361.0	53.6	16	1	1562.0	-	-
494603.0	81.7	16	2	1142.0	1241.0	-
665378.0	69.5	16	2	1139.0	1081.0	-
132168.0	67.0	16	2	1750.0	1575.0	-
301670.0	90.7	16	3	1747.0	1801.0	1844.0
472894.0	74.2	16	2	1581.0	1831.0	-
644574.0	55.0	16	1	1983.0	-	-
111239.0	70.5	16	2	1911.0	1040.0	-
281223.0	84.8	16	3	1287.0	1405.0	1503.0
451997.0	76.7	16	2	1315.0	1959.0	-
621504.0	94.9	16	3	1185.0	1665.0	1437.0
90388.0	66.2	16	1	1793.0	-	-
261271.0	65.6	16	1	1471.0	-	-
432158.0	55.0	16	1	1398.0	-	-
602923.0	57.8	16	1	1508.0	-	-
69356.0	66.2	16	1	1762.0	-	-
239172.0	84.5	16	3	1083.0	1948.0	1535.0

Type 5 Radar Waveform_2

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
634153.0	92.9	9	3	1413.0	1585.0	1221.0
899877.0	58.9	9	1	1595.0	-	-
74579.0	99.7	9	3	1110.0	1787.0	1267.0
338590.0	69.1	9	2	1744.0	1005.0	-
601399.0	88.1	9	3	1543.0	1419.0	1781.0
864877.0	91.4	9	3	1984.0	1490.0	1208.0
42133.0	78.1	9	2	1712.0	1945.0	-
305973.0	70.7	9	2	1325.0	1810.0	-
570729.0	55.9	9	1	1347.0	-	-
834514.0	53.2	9	1	1958.0	-	-
9663.0	75.4	9	2	1067.0	1377.0	-

Type 5 Radar Waveform_3

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
334777.0	59.8	6	1	1732.0	-	-
657695.0	66.0	6	1	1806.0	-	-
980784.0	51.3	6	1	1601.0	-	-
1302069.0	81.5	6	2	1352.0	1987.0	-
294347.0	85.2	6	3	1718.0	1898.0	1046.0
617980.0	60.2	6	1	1671.0	-	-
939672.0	71.3	6	2	1900.0	1579.0	-
1264488.0	56.7	6	1	1072.0	-	-
255031.0	80.2	6	2	1261.0	1430.0	-

Type 5 Radar Waveform_4

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
305676.0	58.8	16	1	1873.0	-	-
475615.0	67.3	16	2	1489.0	1573.0	-
647090.0	53.1	16	1	1954.0	-	-
113694.0	74.0	16	2	1897.0	1246.0	-
284972.0	66.0	16	1	1062.0	-	-
454868.0	78.9	16	2	1234.0	1443.0	-
625914.0	78.7	16	2	1049.0	1070.0	-
92575.0	91.7	16	3	1760.0	1138.0	1188.0
263768.0	50.6	16	1	1457.0	-	-
433154.0	85.1	16	3	1269.0	1042.0	1511.0
604053.0	70.6	16	2	1175.0	1917.0	-
71855.0	50.6	16	1	1677.0	-	-
241632.0	99.3	16	3	1273.0	1827.0	1523.0
412635.0	77.4	16	2	1735.0	1313.0	-
582949.0	77.7	16	2	1592.0	1631.0	-
50681.0	77.2	16	2	1893.0	1684.0	-
221178.0	71.5	16	2	1190.0	1860.0	-

Type 5 Radar Waveform_5

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
556454.0	61.8	10	1	1385.0	-	-
798866.0	65.6	10	1	1115.0	-	-
42102.0	90.3	10	3	1486.0	1148.0	1792.0
283764.0	91.5	10	3	1378.0	1162.0	1168.0
525540.0	96.4	10	3	1211.0	1011.0	1214.0
766281.0	84.8	10	3	1624.0	1583.0	1472.0
12379.0	70.9	10	2	1172.0	1698.0	-
254252.0	79.7	10	2	1574.0	1149.0	-
496515.0	60.7	10	1	1934.0	-	-
737487.0	68.8	10	2	1978.0	1429.0	-
979037.0	75.3	10	2	1751.0	1814.0	-
224754.0	63.3	10	1	1411.0	-	-

Type 5 Radar Waveform_6

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
699884.0	81.0	5	2	1388.0	1865.0	-
1064349.0	55.3	5	1	1201.0	-	-
1425227.0	83.8	5	3	1330.0	1154.0	1475.0
292550.0	51.0	5	1	1258.0	-	-
654439.0	86.0	5	3	1896.0	1974.0	1050.0
1018578.0	75.7	5	2	1006.0	1659.0	-
1381443.0	75.6	5	2	1105.0	1869.0	-
247692.0	55.8	5	1	1765.0	-	-

Type 5 Radar Waveform_7

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
348023.0	75.7	13	2	1877.0	1963.0	-
556654.0	53.1	13	1	1260.0	-	-
763962.0	59.1	13	1	1563.0	-	-
115900.0	62.7	13	1	1465.0	-	-
322133.0	86.4	13	3	1539.0	1436.0	1918.0
530127.0	70.0	13	2	1763.0	1041.0	-
737088.0	70.8	13	2	1736.0	1350.0	-
90266.0	82.7	13	2	1113.0	1033.0	-
297276.0	74.8	13	2	1348.0	1812.0	-
505357.0	60.5	13	1	1530.0	-	-
710226.0	88.6	13	3	1395.0	1730.0	1578.0
64651.0	73.7	13	2	1200.0	1901.0	-
272271.0	54.3	13	1	1568.0	-	-
479675.0	63.6	13	1	1745.0	-	-

Type 5 Radar Waveform_8

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
960269.0	98.4	7	3	1829.0	1203.0	1554.0
54915.0	55.6	7	1	1652.0	-	-
345470.0	66.5	7	1	1936.0	-	-
634082.0	88.8	7	3	1807.0	1925.0	1889.0
926783.0	62.4	7	1	1709.0	-	-
19095.0	82.5	7	2	1044.0	1838.0	-
309266.0	82.2	7	2	1973.0	1559.0	-
598700.0	94.4	7	3	1933.0	1316.0	1774.0
891358.0	55.2	7	1	1206.0	-	-
1182197.0	60.1	7	1	1111.0	-	-

Type 5 Radar Waveform_9

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
228325.0	53.3	9	1	1238.0	-	-
470137.0	78.4	9	2	1029.0	1099.0	-
711096.0	69.6	9	2	1999.0	1609.0	-
952597.0	79.8	9	2	1968.0	1803.0	-
197767.0	86.8	9	3	1420.0	1644.0	1802.0
439269.0	99.6	9	3	1798.0	1265.0	1461.0
682870.0	63.2	9	1	1356.0	-	-
924717.0	51.7	9	1	1739.0	-	-
168563.0	52.0	9	1	1759.0	-	-
410061.0	71.4	9	2	1577.0	1656.0	-
650739.0	95.9	9	3	1912.0	1199.0	1757.0
895551.0	58.6	9	1	1007.0	-	-

Type 5 Radar Waveform_10

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
151453.0	56.4	8	1	1207.0	-	-
414904.0	77.6	8	2	1703.0	1696.0	-
679976.0	55.0	8	1	1289.0	-	-
942816.0	76.3	8	2	1863.0	1073.0	-
118829.0	64.0	8	1	1841.0	-	-
381850.0	88.3	8	3	1617.0	1846.0	1542.0
647139.0	54.8	8	1	1769.0	-	-
911487.0	50.1	8	1	1534.0	-	-
86200.0	80.2	8	2	1468.0	1566.0	-
350424.0	51.6	8	1	1852.0	-	-
614810.0	58.9	8	1	1400.0	-	-

Type 5 Radar Waveform_11

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
741622.0	67.3	11	2	1982.0	1916.0	-
45515.0	56.9	11	1	1013.0	-	-
268614.0	78.1	11	2	1516.0	1314.0	-
490541.0	84.6	11	3	1800.0	1854.0	1537.0
713809.0	97.2	11	3	1796.0	1202.0	1355.0
17957.0	63.3	11	1	1655.0	-	-
240688.0	93.2	11	3	1074.0	1748.0	1666.0
463908.0	73.6	11	2	2000.0	1630.0	-
687524.0	81.3	11	2	1729.0	1069.0	-
908703.0	98.0	11	3	1799.0	1920.0	1118.0
213289.0	99.1	11	3	1410.0	1599.0	1295.0
437225.0	59.3	11	1	1976.0	-	-
660744.0	58.0	11	1	1805.0	-	-

Type 5 Radar Waveform_12

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
676167.0	50.4	16	1	1351.0	-	-
142108.0	91.0	16	3	1012.0	1294.0	1016.0
311845.0	95.9	16	3	1406.0	1797.0	1593.0
482910.0	75.3	16	2	1417.0	1881.0	-
652452.0	97.4	16	3	1647.0	1216.0	1357.0
120964.0	86.9	16	3	1450.0	1682.0	1091.0
291931.0	71.6	16	2	1026.0	1286.0	-
461762.0	82.9	16	2	1840.0	1700.0	-
632903.0	67.8	16	2	1517.0	1133.0	-
99909.0	89.7	16	3	1565.0	1672.0	1639.0
269859.0	99.3	16	3	1909.0	1433.0	1706.0
440299.0	88.9	16	3	1252.0	1401.0	1654.0
610288.0	83.8	16	3	1679.0	1379.0	1439.0
79098.0	86.1	16	3	1224.0	1104.0	1389.0
249711.0	68.4	16	2	1788.0	1039.0	-
419309.0	94.0	16	3	1904.0	1053.0	1402.0
588852.0	89.5	16	3	1868.0	1885.0	1318.0

Type 5 Radar Waveform_13

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
76270.0	55.1	11	1	1649.0	-	-
299335.0	80.0	11	2	1497.0	1414.0	-
523332.0	51.6	11	1	1453.0	-	-
746279.0	69.4	11	2	1143.0	1020.0	-
48768.0	52.3	11	1	1181.0	-	-
271591.0	72.8	11	2	1939.0	1833.0	-
495812.0	58.6	11	1	1428.0	-	-
719382.0	64.9	11	1	1376.0	-	-
21226.0	66.0	11	1	1217.0	-	-
243918.0	88.4	11	3	1003.0	1967.0	1589.0
468039.0	58.8	11	1	1899.0	-	-
689784.0	97.8	11	3	1299.0	1731.0	1094.0
915096.0	64.5	11	1	1670.0	-	-

Type 5 Radar Waveform_14

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
176344.0	60.7	14	1	1770.0	-	-
357902.0	57.4	14	1	1586.0	-	-
538394.0	68.3	14	2	1720.0	1284.0	-
718475.0	97.0	14	3	1790.0	1187.0	1157.0
153647.0	75.9	14	2	1518.0	1928.0	-
335033.0	73.0	14	2	1549.0	1176.0	-
514346.0	92.4	14	3	1705.0	1866.0	1940.0
697529.0	79.6	14	2	1097.0	1606.0	-
131744.0	52.8	14	1	1171.0	-	-
311874.0	93.4	14	3	1815.0	1484.0	1421.0
494014.0	80.1	14	2	1603.0	1019.0	-
675517.0	76.0	14	2	1320.0	1036.0	-
108890.0	99.6	14	3	1375.0	1463.0	1645.0
290292.0	67.2	14	2	1640.0	1323.0	-
471932.0	78.9	14	2	1030.0	1204.0	-
650702.0	95.8	14	3	1641.0	1740.0	1813.0

Type 5 Radar Waveform_15

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
174109.0	63.4	6	1	1447.0	-	-
536832.0	77.2	6	2	1686.0	1776.0	-
899879.0	74.7	6	2	1483.0	1832.0	-
1263259.0	79.6	6	2	1742.0	1114.0	-
129045.0	91.9	6	3	1824.0	1657.0	1391.0
491777.0	92.8	6	3	1198.0	1892.0	1427.0
855496.0	69.0	6	2	1021.0	1715.0	-
1219994.0	57.6	6	1	1060.0	-	-

Type 5 Radar Waveform_16

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
42090.0	88.7	15	3	1322.0	1661.0	1226.0
222803.0	98.1	15	3	1704.0	1161.0	1895.0
404702.0	68.1	15	2	1125.0	1502.0	-
584046.0	87.2	15	3	1926.0	1227.0	1919.0
19888.0	60.3	15	1	1245.0	-	-
201220.0	81.3	15	2	1090.0	1140.0	-
381111.0	98.5	15	3	1545.0	1949.0	1602.0
564131.0	62.7	15	1	1971.0	-	-
743181.0	85.2	15	3	1331.0	1754.0	1264.0
178985.0	53.2	15	1	1795.0	-	-
359898.0	79.0	15	2	1839.0	1098.0	-
540228.0	91.9	15	3	1387.0	1364.0	1368.0
722034.0	70.5	15	2	1257.0	1924.0	-
155966.0	86.9	15	3	1849.0	1445.0	1687.0
338387.0	60.2	15	1	1151.0	-	-
518515.0	95.4	15	3	1045.0	1146.0	1108.0

Type 5 Radar Waveform_17

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
863101.0	51.6	11	1	1884.0	-	-
165427.0	59.8	11	1	1327.0	-	-
388964.0	52.3	11	1	1366.0	-	-
610152.0	86.7	11	3	1848.0	1346.0	1717.0
835190.0	71.6	11	2	1236.0	1079.0	-
137306.0	93.4	11	3	1842.0	1555.0	1835.0
361228.0	52.7	11	1	1876.0	-	-
585141.0	55.6	11	1	1100.0	-	-
806700.0	79.8	11	2	1910.0	1526.0	-
110162.0	69.1	11	2	1525.0	1399.0	-
333668.0	52.6	11	1	1986.0	-	-
557348.0	61.2	11	1	1512.0	-	-
778269.0	84.2	11	3	1734.0	1541.0	1291.0

Type 5 Radar Waveform_18

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
89554.0	68.1	10	2	1990.0	1278.0	-
331466.0	72.7	10	2	1462.0	1285.0	-
573630.0	68.0	10	2	1022.0	1205.0	-
814376.0	88.4	10	3	1275.0	1310.0	1166.0
59901.0	60.6	10	1	1191.0	-	-
302178.0	58.3	10	1	1080.0	-	-
543333.0	77.8	10	2	1444.0	1680.0	-
786297.0	54.9	10	1	1613.0	-	-
30064.0	55.1	10	1	1153.0	-	-
271772.0	69.2	10	2	1301.0	1847.0	-
513591.0	71.5	10	2	1451.0	1598.0	-
754448.0	94.9	10	3	1784.0	1088.0	1412.0

Type 5 Radar Waveform_19

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
149.0	67.3	18	2	1538.0	1821.0	-
160886.0	90.9	18	3	1244.0	1600.0	1076.0
321290.0	96.3	18	3	1625.0	1109.0	1871.0
481373.0	88.3	18	3	1980.0	1906.0	1390.0
642349.0	87.1	18	3	1683.0	1861.0	1147.0
141210.0	75.2	18	2	1590.0	1749.0	-
301987.0	76.5	18	2	1820.0	1741.0	-
462925.0	67.0	18	2	1870.0	1528.0	-
623272.0	79.4	18	2	1953.0	1994.0	-
121400.0	78.0	18	2	1303.0	2000.0	-
282277.0	82.0	18	2	1380.0	1947.0	-
442100.0	90.5	18	3	1634.0	1616.0	1660.0
604002.0	82.4	18	2	1927.0	1440.0	-
101406.0	86.1	18	3	1571.0	1551.0	1337.0
262020.0	95.3	18	3	1658.0	1001.0	1779.0
422165.0	95.3	18	3	1691.0	1811.0	1667.0
586208.0	62.5	18	1	1071.0	-	-
81945.0	57.4	18	1	1845.0	-	-

Type 5 Radar Waveform_20

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
312021.0	91.3	12	3	1010.0	1520.0	1607.0
519598.0	78.6	12	2	1359.0	1633.0	-
726128.0	87.3	12	3	1354.0	1222.0	1155.0
79751.0	78.6	12	2	1407.0	1725.0	-
286733.0	67.0	12	2	1922.0	1635.0	-
494246.0	80.6	12	2	1063.0	1643.0	-
702399.0	60.9	12	1	1580.0	-	-
54335.0	53.4	12	1	1610.0	-	-
261755.0	59.9	12	1	1851.0	-	-
468736.0	78.6	12	2	1209.0	1470.0	-
675319.0	82.4	12	2	1694.0	1808.0	-
28670.0	90.5	12	3	1878.0	1254.0	1642.0
235477.0	96.6	12	3	1857.0	1494.0	1131.0
442362.0	90.6	12	3	1979.0	1163.0	1170.0

Type 5 Radar Waveform_21

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1012026.0	80.8	6	2	1907.0	1965.0	-
5000.0	91.8	6	3	1196.0	1505.0	1135.0
328120.0	54.2	6	1	1096.0	-	-
651203.0	52.4	6	1	1150.0	-	-
973707.0	56.5	6	1	1961.0	-	-
1296284.0	67.3	6	2	1268.0	1024.0	-
287675.0	92.8	6	3	1488.0	1194.0	1396.0
609475.0	93.9	6	3	1746.0	1675.0	1935.0
933548.0	76.1	6	2	1426.0	1084.0	-

Type 5 Radar Waveform_22

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
867559.0	94.3	11	3	1136.0	1423.0	1506.0
171877.0	54.7	11	1	1702.0	-	-
394206.0	90.2	11	3	1093.0	1828.0	1422.0
616407.0	90.7	11	3	1726.0	1872.0	1669.0
841121.0	77.6	11	2	1304.0	1648.0	-
144461.0	55.9	11	1	1000.0	-	-
367282.0	74.6	11	2	1915.0	1120.0	-
591644.0	63.0	11	1	1129.0	-	-
813825.0	82.5	11	2	1469.0	1266.0	-
116536.0	92.4	11	3	1229.0	1594.0	1167.0
339043.0	97.7	11	3	1424.0	1685.0	1964.0
563390.0	78.0	11	2	1028.0	1263.0	-
785473.0	93.0	11	3	1123.0	1276.0	1340.0

Type 5 Radar Waveform_23

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
68310.0	57.6	16	1	1085.0	-	-
238159.0	88.8	16	3	1182.0	1126.0	1977.0
409249.0	73.9	16	2	1360.0	1326.0	-
581040.0	65.6	16	1	1178.0	-	-
47159.0	77.3	16	2	1409.0	1101.0	-
217121.0	83.6	16	3	1459.0	1997.0	1082.0
389046.0	65.3	16	1	1230.0	-	-
557689.0	98.0	16	3	1341.0	1055.0	1674.0
26092.0	84.6	16	3	1075.0	1144.0	1737.0
195905.0	88.9	16	3	1993.0	1989.0	1498.0
366880.0	81.5	16	2	1393.0	1972.0	-
536601.0	91.4	16	3	1193.0	1345.0	1692.0
5138.0	59.6	16	1	1858.0	-	-
175287.0	90.6	16	3	1358.0	1432.0	1467.0
345877.0	81.8	16	2	1455.0	1941.0	-
515947.0	92.8	16	3	1160.0	1064.0	1587.0
685451.0	88.8	16	3	1017.0	1716.0	1867.0

Type 5 Radar Waveform_24

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
187373.0	95.2	13	3	1822.0	1588.0	1864.0
395544.0	64.7	13	1	1887.0	-	-
601772.0	97.4	13	3	1122.0	1215.0	1251.0
810751.0	52.4	13	1	1514.0	-	-
161932.0	93.0	13	3	1923.0	1678.0	1629.0
369675.0	73.8	13	2	1058.0	1567.0	-
577079.0	76.9	13	2	1219.0	1174.0	-
782568.0	90.0	13	3	1956.0	1392.0	1023.0
136466.0	83.4	13	3	1701.0	1991.0	1636.0
343292.0	97.5	13	3	1952.0	1212.0	1584.0
550284.0	85.3	13	3	1825.0	1228.0	1292.0
759200.0	65.5	13	1	1996.0	-	-
111116.0	100.0	13	3	1969.0	1282.0	1328.0
317871.0	98.2	13	3	1438.0	1693.0	1500.0

Type 5 Radar Waveform_25

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
385991.0	98.9	19	3	1339.0	1394.0	1621.0
540640.0	62.6	19	1	1408.0	–	–
63007.0	87.9	19	3	1056.0	1435.0	1888.0
215358.0	84.2	19	3	1324.0	1338.0	1031.0
368899.0	65.5	19	1	1544.0	–	–
519889.0	78.6	19	2	1789.0	1944.0	–
44277.0	91.0	19	3	1192.0	1089.0	1995.0
196500.0	90.0	19	3	1688.0	1274.0	1051.0
350228.0	59.1	19	1	1272.0	–	–
501692.0	78.5	19	2	1955.0	1077.0	–
25577.0	78.1	19	2	1343.0	1951.0	–
178342.0	59.7	19	1	1932.0	–	–
331521.0	65.9	19	1	1038.0	–	–
483905.0	58.6	19	1	1743.0	–	–
6806.0	99.3	19	3	1281.0	1027.0	1164.0
159428.0	67.9	19	2	1145.0	1195.0	–
312310.0	65.3	19	1	1791.0	–	–
462709.0	92.8	19	3	1487.0	1662.0	1817.0
616484.0	70.2	19	2	1638.0	1492.0	–

Type 5 Radar Waveform_26

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
222712.0	93.8	10	3	1061.0	1059.0	1370.0
464443.0	97.2	10	3	1288.0	1018.0	1086.0
706339.0	83.0	10	2	1248.0	1879.0	–
948459.0	80.6	10	2	1231.0	1531.0	–
192876.0	90.5	10	3	1141.0	1651.0	1037.0
435567.0	64.6	10	1	1334.0	–	–
677949.0	64.9	10	1	1078.0	–	–
917111.0	97.1	10	3	1605.0	1369.0	1477.0
163189.0	75.6	10	2	1548.0	1837.0	–
404094.0	94.0	10	3	1771.0	1782.0	1816.0
645868.0	86.1	10	3	1513.0	1711.0	1305.0
888942.0	80.1	10	2	1177.0	1510.0	–

Type 5 Radar Waveform_27

Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
133511.0	82.5	9	2	1054.0	1620.0	–
374787.0	84.6	9	3	1637.0	1233.0	1416.0
616290.0	90.8	9	3	1403.0	1333.0	1532.0
858592.0	82.7	9	2	1930.0	1404.0	–
103648.0	78.8	9	2	1970.0	1365.0	–
345409.0	71.8	9	2	1596.0	1628.0	–
587916.0	56.4	9	1	1937.0	–	–
830542.0	66.3	9	1	1259.0	–	–
73992.0	64.2	9	1	1728.0	–	–
315236.0	97.8	9	3	1985.0	1014.0	1473.0
558340.0	55.1	9	1	1507.0	–	–
800867.0	55.5	9	1	1057.0	–	–

Type 5 Radar Waveform_28						
Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
58899.0	68.8	6	2	1035.0	1121.0	-
381617.0	74.3	6	2	1184.0	1441.0	-
704039.0	83.3	6	2	1293.0	1931.0	-
1027622.0	57.9	6	1	1942.0	-	-
19118.0	68.2	6	2	1727.0	1296.0	-
341252.0	90.8	6	3	1522.0	1988.0	1493.0
664968.0	65.5	6	1	1891.0	-	-
986794.0	82.1	6	2	1913.0	1448.0	-
1308210.0	92.5	6	3	1880.0	1335.0	1309.0

Type 5 Radar Waveform_29						
Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
271358.0	95.4	7	3	1681.0	1540.0	1519.0
562777.0	56.1	7	1	1480.0	-	-
853338.0	50.9	7	1	1646.0	-	-
1143757.0	65.8	7	1	1875.0	-	-
236023.0	82.0	7	2	1092.0	1761.0	-
525381.0	97.4	7	3	1466.0	1853.0	1780.0
816841.0	69.6	7	2	1418.0	1250.0	-
1108420.0	50.5	7	1	1382.0	-	-
200278.0	81.6	7	2	1504.0	1235.0	-
490986.0	65.3	7	1	1921.0	-	-

Radar Type 6 - Radar Statistical Performance

Trail #	1=Detection 0=No Detection	Trail #	1=Detection 0=No Detection
0	1	15	1
1	0	16	1
2	1	17	1
3	1	18	1
4	1	19	1
5	1	20	1
6	1	21	1
7	1	22	1
8	1	23	1
9	1	24	1
10	1	25	1
11	1	26	1
12	1	27	1
13	1	28	1
14	1	29	0
Detection Percentage (%)			93.3%

Type 6 Radar Waveform_0

Frequency List (MHz)	0	1	2	3	4
0	5476	5394	5273	5597	5609
5	5662	5487	5420	5625	5580
10	5389	5486	5385	5439	5294
15	5318	5337	5652	5568	5623
20	5502	5474	5290	5658	5514
25	5393	5368	5250	5542	5295
30	5528	5347	5255	5366	5724
35	5407	5455	5373	5642	5320
40	5688	5621	5508	5501	5694
45	5617	5466	5697	5256	5307
50	5430	5413	5297	5496	5699
55	5645	5330	5286	5442	5519
60	5333	5632	5683	5380	5258
65	5704	5460	5357	5498	5660
70	5703	5691	5689	5622	5274
75	5396	5341	5485	5687	5365
80	5300	5484	5392	5329	5327
85	5419	5278	5676	5615	5538
90	5698	5640	5555	5296	5723
95	5425	5317	5403	5343	5679

Type 6 Radar Waveform_1

Frequency List (MHz)	0	1	2	3	4
0	5256	5633	5684	5283	5354
5	5704	5509	5495	5313	5409
10	5320	5275	5426	5634	5315
15	5406	5464	5589	5697	5285
20	5631	5668	5415	5282	5305
25	5342	5571	5451	5576	5337
30	5417	5304	5470	5518	5544
35	5449	5546	5644	5331	5624
40	5446	5266	5314	5360	5695
45	5289	5473	5547	5468	5652
50	5474	5396	5709	5391	5462
55	5322	5628	5318	5681	5366
60	5593	5682	5643	5670	5627
65	5301	5689	5316	5363	5665
70	5581	5621	5516	5387	5583
75	5475	5556	5648	5455	5328
80	5619	5419	5595	5433	5393
85	5483	5492	5471	5720	5590
90	5330	5534	5357	5442	5372
95	5484	5519	5540	5499	5636

Type 6 Radar Waveform_2

Frequency List (MHz)	0	1	2	3	4
0	5414	5397	5620	5444	5671
5	5368	5531	5570	5476	5616
10	5251	5539	5467	5354	5336
15	5494	5692	5267	5477	5542
20	5262	5453	5371	5604	5668
25	5669	5299	5555	5610	5403
30	5261	5685	5292	5588	5637
35	5537	5720	5463	5409	5384
40	5506	5310	5378	5329	5388
45	5275	5413	5582	5640	5649
50	5598	5402	5291	5596	5662
55	5350	5424	5482	5362	5591
60	5487	5573	5625	5319	5631
65	5679	5502	5422	5426	5675
70	5687	5641	5540	5590	5638
75	5530	5544	5619	5488	5337
80	5615	5323	5339	5322	5534
85	5396	5448	5543	5719	5658
90	5410	5416	5466	5556	5427
95	5468	5417	5519	5549	5697

Type 6 Radar Waveform_3

Frequency List (MHz)	0	1	2	3	4
0	5669	5636	5556	5605	5416
5	5410	5456	5645	5639	5348
10	5560	5425	5508	5452	5357
15	5582	5621	5320	5690	5550
20	5428	5394	5363	5577	5459
25	5521	5502	5659	5644	5518
30	5292	5693	5444	5562	5252
35	5253	5333	5723	5634	5302
40	5492	5322	5649	5307	5309
45	5471	5466	5372	5516	5350
50	5588	5443	5278	5682	5614
55	5301	5711	5720	5652	5615
60	5554	5430	5355	5617	5580
65	5715	5712	5314	5285	5498
70	5283	5419	5439	5520	5499
75	5559	5281	5673	5525	5396
80	5598	5593	5501	5678	5534
85	5700	5376	5359	5680	5316
90	5497	5381	5575	5602	5676
95	5478	5573	5482	5315	5555

Type 6 Radar Waveform_4

Frequency List (MHz)	0	1	2	3	4
0	5449	5400	5492	5291	5258
5	5452	5478	5720	5705	5555
10	5491	5689	5549	5647	5378
15	5573	5273	5326	5260	5386
20	5558	5594	5335	5550	5347
25	5470	5608	5288	5678	5560
30	5656	5650	5543	5693	5285
35	5391	5344	5604	5401	5645
40	5616	5575	5414	5304	5614
45	5289	5554	5519	5259	5295
50	5526	5700	5677	5315	5387
55	5466	5636	5329	5595	5682
60	5374	5342	5256	5301	5343
65	5529	5654	5544	5584	5563
70	5667	5269	5422	5496	5458
75	5431	5719	5506	5648	5708
80	5568	5266	5317	5254	5419
85	5397	5281	5548	5265	5676
90	5713	5587	5590	5537	5533
95	5688	5380	5658	5715	5349

Type 6 Radar Waveform_5

Frequency List (MHz)	0	1	2	3	4
0	5704	5639	5428	5452	5478
5	5494	5403	5320	5393	5384
10	5325	5590	5367	5399	5661
15	5400	5429	5305	5578	5469
20	5663	5373	5444	5523	5613
25	5322	5338	5489	5712	5699
30	5642	5607	5283	5370	5580
35	5433	5532	5651	5559	5552
40	5658	5673	5654	5301	5543
45	5269	5637	5352	5572	5524
50	5646	5702	5276	5291	5709
55	5519	5317	5653	5503	5507
60	5505	5693	5344	5544	5690
65	5279	5476	5366	5264	5255
70	5425	5612	5472	5417	5424
75	5387	5487	5721	5630	5257
80	5329	5692	5449	5603	5632
85	5382	5492	5624	5502	5513
90	5430	5711	5272	5343	5696
95	5592	5517	5683	5359	5286

Type 6 Radar Waveform_6

Frequency List (MHz)	0	1	2	3	4
0	5484	5403	5364	5613	5320
5	5633	5425	5395	5556	5591
10	5256	5267	5253	5562	5420
15	5274	5527	5532	5350	5295
20	5477	5354	5314	5533	5496
25	5501	5271	5539	5593	5266
30	5531	5564	5498	5619	5400
35	5572	5623	5293	5329	5473
40	5391	5363	5611	5419	5375
45	5724	5720	5410	5528	5411
50	5522	5327	5380	5436	5653
55	5367	5544	5709	5624	5535
60	5672	5547	5525	5480	5290
65	5427	5629	5586	5644	5433
70	5338	5461	5448	5376	5272
75	5468	5677	5356	5421	5489
80	5689	5506	5474	5442	5684
85	5589	5553	5664	5597	5595
90	5717	5306	5700	5708	5721
95	5647	5581	5716	5389	5636

Type 6 Radar Waveform_7

Frequency List (MHz)	0	1	2	3	4
0	5642	5300	5677	5540	5675
5	5350	5470	5719	5323	5662
10	5531	5294	5282	5441	5362
15	5557	5635	5298	5584	5485
20	5423	5255	5525	5469	5389
25	5598	5267	5697	5305	5308
30	5420	5424	5713	5296	5711
35	5714	5564	5482	5484	5705
40	5446	5452	5582	5392	5304
45	5704	5328	5468	5581	5676
50	5301	5579	5378	5566	5637
55	5500	5555	5498	5327	5430
60	5664	5492	5357	5403	5568
65	5376	5665	5321	5541	5505
70	5324	5528	5310	5335	5716
75	5576	5449	5369	5667	5585
80	5552	5686	5461	5506	5316
85	5405	5457	5507	5437	5417
90	5285	5723	5718	5582	5342
95	5263	5702	5479	5695	5456

Type 6 Radar Waveform_8

Frequency List (MHz)	0	1	2	3	4
0	5422	5406	5711	5363	5382
5	5717	5372	5545	5310	5627
10	5496	5417	5335	5380	5462
15	5353	5684	5263	5343	5301
20	5396	5589	5293	5614	5442
25	5655	5450	5470	5326	5339
30	5447	5381	5356	5418	5278
35	5330	5360	5257	5398	5544
40	5529	5390	5327	5389	5708
45	5411	5526	5634	5563	5652
50	5280	5429	5460	5444	5268
55	5452	5517	5724	5469	5318
60	5527	5437	5286	5704	5657
65	5391	5325	5701	5628	5433
70	5674	5537	5400	5294	5588
75	5309	5622	5430	5609	5479
80	5448	5615	5683	5656	5409
85	5255	5465	5558	5685	5254
90	5277	5367	5451	5282	5566
95	5377	5577	5595	5654	5632

Type 6 Radar Waveform_9

Frequency List (MHz)	0	1	2	3	4
0	5677	5645	5647	5524	5602
5	5381	5297	5620	5473	5359
10	5427	5681	5376	5575	5483
15	5441	5336	5269	5388	5493
20	5404	5658	5709	5606	5415
25	5543	5399	5576	5527	5373
30	5489	5295	5338	5571	5697
35	5616	5417	5421	5253	5410
40	5312	5383	5612	5328	5567
45	5386	5540	5591	5487	5687
50	5353	5528	5456	5480	5283
55	5291	5406	5707	5446	5440
60	5447	5692	5382	5593	5530
65	5700	5592	5371	5640	5363
70	5703	5431	5271	5296	5631
75	5279	5557	5332	5290	5411
80	5589	5704	5341	5678	5680
85	5572	5428	5688	5512	5458
90	5435	5615	5260	5689	5724
95	5463	5337	5550	5275	5556

Type 6 Radar Waveform_10

Frequency List (MHz)	0	1	2	3	4
0	5457	5409	5583	5685	5444
5	5423	5319	5695	5636	5566
10	5358	5470	5417	5295	5504
15	5529	5463	5372	5336	5412
20	5349	5650	5388	5334	5251
25	5304	5631	5407	5531	5659
30	5311	5471	5436	5556	5609
35	5524	5563	5323	5317	5266
40	5710	5383	5469	5547	5674
45	5545	5265	5715	5404	5632
50	5581	5360	5422	5411	5576
55	5382	5424	5425	5453	5646
60	5415	5320	5676	5670	5595
65	5709	5440	5379	5256	5255
70	5687	5429	5452	5489	5638
75	5602	5485	5505	5363	5677
80	5571	5312	5414	5488	5308
85	5706	5633	5305	5723	5509
90	5572	5314	5392	5648	5438
95	5326	5672	5347	5639	5398

Type 6 Radar Waveform_11

Frequency List (MHz)	0	1	2	3	4
0	5615	5648	5519	5371	5664
5	5465	5719	5295	5324	5395
10	5667	5259	5458	5490	5525
15	5617	5590	5475	5381	5402
20	5323	5418	5591	5687	5361
25	5697	5675	5507	5260	5441
30	5670	5645	5252	5526	5623
35	5634	5695	5700	5320	5338
40	5712	5633	5400	5679	5477
45	5301	5527	5282	5603	5318
50	5505	5658	5333	5582	5544
55	5307	5557	5314	5612	5559
60	5285	5608	5547	5369	5257
65	5279	5592	5616	5269	5405
70	5390	5512	5365	5706	5646
75	5398	5572	5479	5470	5415
80	5266	5669	5426	5577	5388
85	5690	5353	5451	5500	5598
90	5517	5453	5660	5391	5584
95	5428	5447	5643	5417	5429

Type 6 Radar Waveform_12

Frequency List (MHz)	0	1	2	3	4
0	5395	5509	5455	5532	5506
5	5507	5266	5370	5390	5602
10	5598	5523	5499	5685	5546
15	5608	5620	5578	5426	5594
20	5331	5584	5629	5301	5334
25	5488	5527	5710	5364	5475
30	5712	5534	5684	5644	5397
35	5454	5262	5316	5591	5491
40	5626	5472	5483	5617	5715
45	5474	5705	5385	5564	5274
50	5392	5633	5605	5501	5448
55	5268	5327	5281	5256	5314
60	5661	5580	5635	5342	5693
65	5651	5660	5351	5359	5311
70	5682	5367	5692	5622	5451
75	5667	5347	5522	5261	5489
80	5574	5583	5593	5670	5511
85	5595	5563	5568	5252	5375
90	5694	5273	5445	5405	5599
95	5541	5299	5440	5588	5388

Type 6 Radar Waveform_13

Frequency List (MHz)	0	1	2	3	4
0	5650	5273	5391	5693	5251
5	5646	5666	5445	5553	5334
10	5432	5409	5540	5308	5567
15	5696	5272	5681	5471	5311
20	5339	5275	5570	5293	5307
25	5376	5379	5438	5468	5509
30	5279	5520	5641	5384	5549
35	5652	5401	5407	5484	5644
40	5637	5663	5555	5480	5634
45	5487	5448	5622	5327	5657
50	5410	5685	5684	5722	5428
55	5348	5636	5697	5517	5575
60	5702	5402	5259	5493	5503
65	5581	5640	5642	5687	5447
70	5552	5496	5278	5337	5362
75	5635	5658	5564	5714	5668
80	5347	5360	5303	5425	5649
85	5571	5593	5609	5474	5312
90	5431	5522	5500	5325	5381
95	5631	5533	5462	5460	5583

Type 6 Radar Waveform_14

Frequency List (MHz)	0	1	2	3	4
0	5430	5512	5327	5379	5568
5	5688	5520	5716	5638	5363
10	5673	5678	5503	5588	5309
15	5399	5687	5419	5250	5344
20	5511	5382	5280	5264	5328
25	5544	5669	5543	5321	5409
30	5598	5599	5323	5472	5540
35	5498	5551	5722	5271	5396
40	5623	5468	5466	5467	5531
45	5680	5380	5286	5386	5260
50	5336	5251	5292	5349	5651
55	5707	5394	5567	5301	5325
60	5329	5527	5366	5591	5626
65	5279	5347	5299	5350	5420
70	5365	5484	5634	5523	5683
75	5360	5413	5470	5559	5589
80	5712	5496	5451	5534	5504
85	5476	5490	5665	5415	5339
90	5479	5515	5664	5337	5257
95	5263	5611	5533	5537	5378

Type 6 Radar Waveform_15

Frequency List (MHz)	0	1	2	3	4
0	5685	5276	5263	5443	5313
5	5255	5613	5595	5404	5370
10	5294	5462	5719	5698	5609
15	5397	5526	5315	5464	5317
20	5258	5510	5549	5374	5253
25	5530	5655	5272	5298	5577
30	5460	5555	5339	5475	5292
35	5582	5589	5551	5572	5465
40	5561	5354	5334	5388	5395
45	5350	5614	5641	5433	5540
50	5562	5311	5425	5537	5508
55	5325	5688	5547	5649	5257
60	5721	5632	5252	5473	5664
65	5662	5489	5714	5519	5406
70	5333	5513	5482	5480	5382
75	5394	5376	5483	5340	5278
80	5300	5565	5399	5293	5497
85	5599	5264	5527	5424	5490
90	5699	5675	5448	5593	5570
95	5648	5710	5366	5628	5274

Type 6 Radar Waveform_16

Frequency List (MHz)	0	1	2	3	4
0	5368	5515	5674	5604	5630
5	5297	5635	5670	5567	5577
10	5603	5251	5285	5418	5485
15	5653	5509	5266	5579	5490
20	5463	5701	5475	5402	5514
25	5502	5284	5512	5457	5724
30	5721	5302	5444	5250	5476
35	5400	5437	5272	5628	5559
40	5702	5330	5697	5699	5486
45	5696	5416	5263	5362	5611
50	5275	5558	5462	5410	5518
55	5303	5422	5666	5464	5553
60	5516	5390	5489	5601	5321
65	5380	5591	5392	5468	5657
70	5441	5524	5600	5525	5375
75	5593	5596	5345	5363	5465
80	5510	5399	5707	5557	5316
85	5607	5481	5672	5687	5496
90	5636	5610	5625	5632	5608
95	5469	5532	5723	5338	5340

Type 6 Radar Waveform_17

Frequency List (MHz)	0	1	2	3	4
0	5623	5279	5610	5290	5375
5	5436	5560	5270	5633	5406
10	5534	5515	5326	5613	5651
15	5476	5683	5521	5554	5701
20	5652	5431	5455	5674	5684
25	5456	5678	5506	5548	5544
30	5648	5469	5672	5401	5310
35	5385	5393	5715	5500	5390
40	5714	5617	5685	5556	5631
45	5305	5282	5539	5486	5292
50	5439	5413	5700	5573	5405
55	5341	5416	5705	5704	5489
60	5335	5587	5611	5379	5462
65	5688	5438	5637	5531	5304
70	5561	5285	5378	5568	5409
75	5465	5400	5396	5720	5571
80	5356	5703	5377	5509	5523
85	5302	5549	5520	5411	5572
90	5532	5445	5507	5510	5502
95	5670	5569	5627	5680	5713

Type 6 Radar Waveform_18

Frequency List (MHz)	0	1	2	3	4
0	5403	5518	5546	5451	5692
5	5478	5582	5345	5321	5613
10	5485	5401	5367	5711	5672
15	5564	5335	5624	5502	5418
20	5660	5339	5469	5544	5647
25	5572	5308	5406	5707	5683
30	5537	5426	5412	5650	5508
35	5524	5484	5511	5653	5304
40	5553	5700	5623	5536	5560
45	5290	5388	5718	5495	5373
50	5643	5464	5314	5396	5349
55	5529	5370	5420	5523	5460
60	5277	5302	5408	5414	5387
65	5673	5363	5671	5364	5357
70	5461	5571	5258	5441	5359
75	5365	5268	5714	5337	5716
80	5633	5586	5459	5425	5680
85	5391	5483	5603	5440	5486
90	5693	5705	5675	5607	5699
95	5678	5644	5260	5697	5501

Type 6 Radar Waveform_19

Frequency List (MHz)	0	1	2	3	4
0	5658	5282	5482	5612	5437
5	5520	5507	5420	5484	5345
10	5299	5665	5408	5431	5693
15	5652	5462	5630	5547	5610
20	5668	5505	5410	5536	5620
25	5363	5257	5512	5336	5616
30	5250	5523	5383	5627	5327
35	5328	5566	5575	5307	5331
40	5315	5489	5308	5561	5301
45	5550	5392	5270	5471	5548
50	5638	5422	5694	5515	5403
55	5671	5717	5324	5720	5334
60	5593	5442	5598	5532	5603
65	5451	5712	5573	5466	5642
70	5526	5447	5582	5417	5318
75	5388	5285	5415	5337	5351
80	5414	5362	5649	5456	5680
85	5330	5543	5320	5405	5537
90	5428	5365	5611	5641	5581
95	5312	5661	5681	5399	5303

Type 6 Radar Waveform_20

Frequency List (MHz)	0	1	2	3	4
0	5341	5521	5418	5298	5657
5	5562	5529	5495	5647	5552
10	5705	5454	5449	5626	5714
15	5265	5589	5258	5592	5327
20	5579	5574	5351	5625	5593
25	5251	5584	5715	5440	5650
30	5292	5412	5340	5270	5578
35	5526	5666	5675	5581	5704
40	5328	5488	5499	5541	5547
45	5321	5250	5554	5359	5601
50	5525	5395	5566	5420	5615
55	5430	5278	5325	5539	5305
60	5722	5607	5543	5364	5429
65	5397	5438	5285	5648	5405
70	5358	5445	5598	5433	5674
75	5431	5393	5277	5681	5508
80	5428	5396	5461	5670	5334
85	5453	5437	5583	5506	5415
90	5273	5491	5723	5530	5617
95	5578	5366	5324	5300	5370

Type 6 Radar Waveform_21

Frequency List (MHz)	0	1	2	3	4
0	5596	5285	5354	5459	5499
5	5701	5454	5570	5713	5381
10	5636	5718	5490	5346	5260
15	5256	5716	5361	5540	5519
20	5587	5265	5389	5617	5566
25	5614	5533	5443	5544	5684
30	5431	5301	5297	5485	5253
35	5369	5379	5471	5259	5618
40	5642	5571	5437	5641	5628
45	5705	5637	5320	5654	5315
50	5649	5678	5462	5707	5515
55	5358	5276	5376	5585	5671
60	5352	5343	5639	5709	5615
65	5723	5292	5516	5299	5658
70	5272	5711	5650	5377	5366
75	5474	5451	5593	5397	5353
80	5632	5486	5586	5607	5542
85	5390	5446	5695	5623	5612
90	5433	5317	5425	5271	5670
95	5672	5509	5291	5626	5590